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OF THE

PRACTICE OF

BY

WILLIAM CULLEN, M. D.

Professor of the Practice of Physic in the University of Edinburgh;
First Physician to his Majesty for Scotland;
Fellow of the Royal College of Physicians of Edinburgh;
of the Royal Societies of London, of Edinburgh, &c. &c.

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FIRST LINES

OF THE

PRACTICE OF PHYSIC.

PART II.

BOOK III. SECT. III.

OF THE SPASMODIC AFFECTIONS IN THE NATURAL FUNCTIONS.

CHAP. VIII.

OF THE PYROSIS, OR WHAT IS NAMED IN SCOTLAND THE WATER-BRASH.

MCCCCXXVII.

THE painful ſenſations referred to the ſtomach, and which are probably occaſioned by real affections of this organ,

are of different kinds. Probably they proceed from affections of different natures, and ſhould therefore be diſtinguiſhed by different appellations; but I muſt own that the utmoſt preciſion in this matter will be difficult. In my eſſay towards a methodical Noſology, I have, however, attempted it. For thoſe pains that are either acute and pungent, or accompanied with a ſenſe of diſtention, or with a ſenſe of conſtriction, if they are at the ſame time not attended with any ſenſe of acrimony or heat, I employ the appellation of Gaſtrodynia. To expreſs thoſe painful or uneaſy ſenſations which ſeem to ariſe from a ſenſe of acrimony irritating the part, or from ſuch a ſenſe of heat as the application of acrids, whether externally or internally applied, often gives, I employ the term of Cardialgia; and by this I particularly mean to denote thoſe feelings which are expreſſed by the term Heartburn in the

the English language. I think the term Soda has been commonly employed by practical writers to expreſs an affection attended with feelings of the latter kind.

MCCCCXXVIII.

Beſide the pains denoted by the terms Gaſtrodynia, Periadynia, Cardialgia, and Soda, there is, I think, another painful ſenſation different from all of theſe, which is named by Mr Sauvages Pyroſis Suecica; and his account of it is taken from Linnæus, who names it Cardialgia Sputatoria. Under the title of Pyroſis Mr Sauvages has formed a genus, of which the whole of the ſpecies, except the eighth, which he gives under the title of Pyroſis Suecica, are all of them ſpecies of the Gaſtrodynia or of the Cardialgia; and if there is a genus to be formed under the title of Pyroſis, it can in my opinion comprehend only the ſpecies I

have mentioned. In this caſe, indeed, I own that the term is not very proper; but my averſion to introduce new names has made me continue to employ the term of Mr Sauvages.

MCCCCXXIX.

The Gaſtrodynia and Cardialgia I judge to be for the moſt part ſymptomatic affections; and therefore have given them no place in this work: but the Pyroſis, as an idiopathic diſeaſe, and never before treated of in any ſyſtem, I propoſe to treat of here.

MCCCCXXX.

It is a diſeaſe frequent among people in lower life; but occurs alſo, though more rarely, in people of better condition. Though frequent in Scotland, it is by no means

means ſo frequent as Linnæus reports it to be in Lapland. It appears moſt commonly in perſons under middle age, but ſeldom in any perſons before the age of puberty. When it has once taken place, it is ready to recur occaſionally for a long time after; but it ſeldom appears in perſons conſiderably advanced in life. It affects both ſexes, but more frequently the female. It ſometimes attacks pregnant women, and ſome women only when they are in that condition. Of other women, it more frequently affects the unmarried; and of the married, moſt frequently the barren. I have had many inſtances of its occurring in women labouring under a fluor albus.

MCCCCXXXI.

The fits of this diſeaſe uſually come on in the morning and forenoon, when the

ſtomach is empty. The firſt ſymptom of it is a pain at the pit of the ſtomach, with a ſenſe of conſtriction, as if the ſtomach was drawn towards the back; the pain is increaſed by raiſing the body into an erect poſture, and therefore the body is bended forward. This pain is often very ſevere; and, after continuing for ſome time, it brings on an eructation of a thin watery fluid in conſiderable quantity. This fluid has ſometimes an acid taſte, but is very often abſolutely inſipid. The eructation is for ſome time frequently repeated; and does not immediately give relief to the pain which preceded it, but does ſo at length, and puts an end to the fit.

MCCCCXXXII.

The fits of this diſeaſe commonly come on without any evident exciting cauſe; and I have not found it ſteadily connec-

ted

ted with any particular diet. It attacks perſons uſing animal food, but I think more frequently thoſe living on milk and farinacea. It ſeems often to be excited by cold applied to the lower extremities; and is readily excited by any conſiderable emotion of mind. It is often without any ſymptoms of dyſpepſia.

MCCCCXXXIII.

The nature of this affection is not very obvious; but I think it may be explained in this manner: It ſeems to begin by a ſpaſm of the muſcular fibres of the ſtomach; which is afterwards, in a certain manner, communicated to the blood-veſſels and exhalants, ſo as to increaſe the impetus of the fluids in theſe veſſels, while a conſtriction takes place on their extremities. While therefore the increaſed im-

petus determines a greater quantity than ufual of fluids into thefe veffels, the conftriction upon their extremities allows only the pure watery parts to be poured out, analogous, as I judge, in every refpect, to what happens in the diabetes hyftericus.

MCCCCXXXIV.

The practice in this difeafe is as difficult as the theory. The paroxyfm is only to be certainly relieved by opium. Other antifpafmodics, as vitriolic ether and volatile alkali, are fometimes of fervice, but not conftantly fo. Although opium and other antifpafmodics relieve the fits, they have no effect in preventing their recurrence. For this purpofe, the whole of the remedies of dyfpepfia have been employed without fuccefs. Of the ufe of the

the nux vomica, mentioned as a remedy by Linnæus, I have had no experience.

CHAP.

CHAP. IX.

OF THE COLIC.

MCCCCXXXV.

THE principal ſymptom of this diſeaſe, is a pain felt in the lower belly. It is ſeldom fixed and pungent in one part, but is a painful diſtention in ſome meaſure ſpreading over the whole of the belly; and particularly with a ſenſe of twiſting or wringing round the navel. At the ſame time, with this pain, the navel and

and teguments of the belly are frequently drawn inwards, and often the mufcles of the belly are fpafmodically contracted, and this in feparate portions, giving the appearance of a bag full of round balls.

MCCCCXXXVI.

Such pains, in a certain degree, fometimes occur in cafes of diarrhœa and cholera; but thefe are lefs violent and more tranfitory, and are named Gripings. It is only when more violent and permanent, and attended with coftivenefs, that they conftitute colic. This is alfo commonly attended with vomiting, which in many cafes is frequently repeated, efpecially when any thing is taken down into the ftomach; and in fuch vomitings, not only the contents of the ftomach are thrown up, but alfo the contents of the duodenum, and therefore frequently a quantity of bile.

MCCCCXXXVII.

In ſome caſes of colic, the periſtaltic motion is inverted through the whole length of the alimentary canal, in ſuch a manner that the contents of the great guts, and therefore ſtercoraceous matter, is thrown up by vomiting; and the ſame inverſion appears ſtill more clearly from this, that what is thrown into the rectum by glyſter is again thrown out by the mouth. In theſe circumſtances of inverſion the diſeaſe has been named Ileus, or the Iliac Paſſion; and this has been ſuppoſed to be a peculiar diſeaſe diſtinct from colic; but to me it appears that the two diſeaſes are owing to the ſame proximate cauſe, and have the ſame ſymptoms, only in different degree.

MCCCCXXXVIII.

MCCCCXXXVIII.

The colic is often without any pyrexia attending it. Sometimes, however, an inflammation comes upon the part of the inteſtine eſpecially affected; and this inflammation aggravates all the ſymptoms of the diſeaſe, being probably what brings on the moſt conſiderable inverſion of the periſtaltic motion; and, as the ſtercoraceous vomiting is what eſpecially diſtinguiſhes the ileus, this has been conſidered as always depending on an inflammation of the inteſtines. However, I can affirm, that as there are inflammations of the inteſtines without ſtercoraceous vomiting, ſo I have ſeen inſtances of ſtercoraceous vomiting without inflammation; and there is therefore no ground for diſtinguiſhing ileus from colic, but as a higher degree of the ſame affection.

MCCCCXXXIX.

MCCCCXXXIX.

The ſymptoms of the colic, and the diſſections of bodies dead of this diſeaſe, ſhow very clearly, that it depends upon a ſpaſmodic conſtriction of a part of the inteſtines; and that this therefore is to be conſidered as the proximate cauſe of the diſeaſe. In ſome of the diſſections of perſons dead of this diſeaſe, an intus-ſuſception has been remarked to have happened; but whether this be conſtantly the caſe in all the appearances of ileus, is not certainly determined.

MCCCCXL.

The colic has commonly been conſidered as being of different ſpecies, but I cannot follow the writers on this ſubject in the diſtinctions they have eſtabliſhed. So far, however, as a difference of the remote

caufe conftitutes a difference of fpecies, a diftinction may perhaps be admitted; and accordingly in my Nofology I have marked feven different fpecies: but I am well perfuaded, that in all thefe different fpecies the proximate caufe is the fame, that is, a fpafmodic conftriction of a part of the inteftines; and confequently, that in all thefe cafes the indication of cure is the fame, that is, to remove the conftriction mentioned. Even in the feveral fpecies named *Stercorea*, *Callofa*, and *Calculofa*, in which the difeafe depends upon an obftruction of inteftine, I am perfuaded that thefe obftructions do not produce the fymptoms of colic, excepting in fo far as they produce fpafmodic conftrictions of the inteftines; and therefore, that the means of cure in thefe cafes, fo far as they admit of cure, muft be obtained by the fame means which the general indication above mentioned fuggefts.

MCCCCXLI.

MCCCCXLI.

The cure, then, of the colic univerſally, is to be obtained by removing the ſpaſmodic conſtrictions of the inteſtines; and the remedies ſuited to this purpoſe may be referred to three general heads:

1. The taking off the ſpaſm by various antiſpaſmodic powers.

2. The exciting the action of the inteſtines by purgatives.

3. The employing mechanical dilatation.

MCCCCXLII.

Before entering upon a more particular account of theſe remedies, it will be proper to obſerve, that in all caſes of violent colic, it is adviſeable to practiſe blood-letting; both as it may be uſeful in obviating the inflammation which is com-

monly to be apprehended, and even as it may be a means of relaxing the ſpaſm of the inteſtine. This remedy may perhaps be improper in perſons of a weak and lax habit, but in all perſons of tolerable vigour it will be a ſafe remedy; and in all caſes where there is the leaſt ſuſpicion of an inflammation actually coming on, it will be abſolutely neceſſary. Nay, it will be even proper to repeat it perhaps ſeveral times, if, with a full and hard pulſe, the appearance of the blood drawn, and the relief obtained by the firſt bleeding, ſhall authoriſe ſuch repetition.

MCCCCXLIII.

The antiſpaſmodic powers that may be employed, are, the application of heat in a dry or humid form, the application of bliſters, the uſe of opium, and the uſe of mild oils.

The application of heat, in a dry form, has been employed by applying to the belly of the patient a living animal, or bladders filled with warm water, or bags of ſubſtances which long retain their heat; and all theſe have ſometimes been applied with ſucceſs; but none of them ſeem to me ſo powerful as the application of heat in a humid form.

This may be employed either by the immerſion of a great part of the body in warm water, or by fomenting the belly with cloths wrung out of hot water. The immerſion has advantages from the application of it to a greater part of the body, and particularly to the lower extremities: but immerſion cannot always be conveniently practiſed, and fomentation may have the advantage of being longer continued; and it may have nearly all the benefit of immerſion, if it be at the ſame

time

time applied both to the belly and to the lower extremities.

MCCCCXLIV.

From confidering that the teguments of the lower belly have fuch a connection with the inteftines, as at the fame time to be affected with fpafmodic contractions, we perceive that blifters applied to the belly may have the effect of taking off the fpafms both from the mufcles of the belly and from the inteftines; and accordingly, bliftering has often been employed in the colic with advantage. Analogous to this, rubefacients applied to the belly have been frequently found ufeful.

MCCCCXLV.

The ufe of opium in colic may feem to be an ambiguous remedy. Very certainly

it may for ſome time relieve the pain, which is often ſo violent and urgent, that it is difficult to abſtain from the uſe of ſuch a remedy. At the ſame time, the uſe of opium retards or ſuſpends the periſtaltic motion ſo much, as to allow the inteſtines to fall into conſtrictions; and may therefore, while it relieves the pain, render the cauſe of the diſeaſe more obſtinate. On this account, and further as opium prevents the operation of purgatives ſo often neceſſary in this diſeaſe, many practitioners are averſe to the uſe of it, and ſome entirely reject the uſe of it as hurtful. There are, however, others who think they can employ opium in this diſeaſe with much advantage.

In all caſes where the colic comes on without any previous coſtiveneſs, and ariſes from cold, from paſſions of the mind, or other cauſes which operate eſpecially on the nervous ſyſtem, opium proves a ſafe and

and certain remedy; but in cafes which have been preceded by long coftivenefs, or where the colic, though not preceded by coftivenefs, has however continued for fome days without a ftool, fo that a ftagnation of fæces in the colon is to be fufpected, the ufe of opium is of doubtful effect. In fuch cafes, unlefs a ftool has been firft procured by medicine, opium cannot be employed but with fome hazard of aggravating the difeafe. However, even in thofe circumftances of coftivenefs, when, without inflammation, the violence of the fpafm is to be fufpected, when vomiting prevents the exhibition of purgatives, and when with all this the pain is extremely urgent, opium is to be employed, not only as an anodyne, but alfo as an antifpafmodic, neceffary to favour the operation of purgatives; and may be fo employed, when, either at the fame time with the

 opiate,

opiate, or not long after it, a purgative can be exhibited.

Is the hyoſciamus, as often ſhowing, along with its narcotic, a purgative quality, better ſuited to this diſeaſe than opium?

MCCCCXLVI.

It is ſeemingly on good grounds that ſeveral practitioners have recommended the large uſe of mild oils in this diſeaſe, both as antiſpaſmodics and as laxatives; and, where the palate and ſtomach could admit them, I have found them very uſeful. But as there are few Scottiſh ſtomachs that can admit a large uſe of oils, I have had few opportunities of employing them.

DCCCCXLVII.

The ſecond ſet of remedies adapted to the

the cure of colic, are purgatives; which, by exciting the action of the inteſtines, either above or below the obſtructed place, may remove the conſtriction; and therefore theſe purgatives may be given either by the mouth, or thrown by glyſter into the anus. As the diſeaſe is often ſeated in the great guts; as glyſters, by having a more ſudden operation, may give more immediate relief; and as purgatives given by the mouth are ready to be rejected by vomiting; ſo it is common, and indeed proper, to attempt curing the colic in the firſt place by glyſters. Theſe may at firſt be of the mildeſt kind, conſiſting of a large bulk of water, with ſome quantity of a mild oil; and ſuch are ſometimes ſufficiently efficacious: however, they are not always ſo; and it is commonly neceſſary to render them more powerfully ſtimulant by the addition of neutral ſalts, of which the moſt powerful is the common or ma-

rine ſalt. If theſe ſaline glyſters, as ſometimes happens, are rendered again too quickly, and on this account or otherwiſe are found ineffectual, it may be proper, inſtead of theſe ſalts, to add to the glyſters an infuſion of ſenna, or of ſome other purgative that can be extracted by water. The antimonial wine may be ſometimes employed in glyſters with advantage. Hardly any glyſters are more effectual than thoſe made of turpentine properly prepared. When all other injections are found ineffectual, recourſe is to be had to the injection of tobacco-ſmoke; and, when even this fails, recourſe is to be had to the mechanical dilatation to be mentioned hereafter.

MCCCCXLVIII.

As glyſters often fail altogether in relieving this diſeaſe, and as even when they

give

give ſome relief they are often imperfect in producing a complete cure; ſo it is generally proper, and often neceſſary, to attempt a more entire and certain cure by purgatives given by the mouth. The more powerful of theſe, or, as they are called, the Draſtic Purgatives, may be ſometimes neceſſary; but their uſe is to be avoided, both becauſe they are apt to be rejected by vomiting, and becauſe when they do not ſucceed in removing the obſtruction they are ready to induce an inflammation. Upon this account it is uſual, and indeed proper, at leaſt in the firſt place, to employ the milder and leſs inflammatory purgatives. None have ſucceeded with me better than the cryſtals of tartar, becauſe this medicine may be conveniently given, in ſmall but repeated doſes, to a conſiderable quantity; and under this management it is the purgative leaſt ready to be

rejected

rejected by vomiting, and much leſs ſo than the other neutral ſalts. If a ſtronger purgative be required, jalap, properly prepared, is leſs offenſive to the palate, and ſits better upon the ſtomach, than moſt other powerful purgatives. On many occaſions of colic, nothing is more effectually purgative than a large doſe of calomel. Some practitioners have attempted to remove the obſtruction of the inteſtines by antimonial emetics exhibited in ſmall doſes, repeated at proper intervals; and when theſe doſes are not entirely rejected by vomiting, they often prove effectual purgatives.

When every purgative has failed, the action of the inteſtines has been effectually excited by throwing cold water on the lower extremities.

MCCCCXLIX.

The third means of overcoming the ſpaſm of the inteſtines in this diſeaſe, is by employing a mechanical dilatation; and it has been frequently ſuppoſed that quickſilver, given in large quantity, might operate in this manner. I have not, however, found it ſucceſsful; and the theory of it is with me very doubtful. Some authors have mentioned the uſe of gold and ſilver pills, or balls, ſwallowed down; but I have no experience of ſuch practices, and I cannot ſuppoſe them a probable means of relief.

MCCCCL.

Another means of mechanical dilatation, and a more probable meaſure, is by injecting a large quantity of warm water by a proper ſyringe, which may throw it with

ſome force, and in a continued ſtream, into the rectum. Both from the experiments reported by the late Mr De Haen, and from thoſe I myſelf have had occaſion to make, I judge this remedy to be one of the moſt powerful and effectual.

MCCCCLI.

I have now mentioned all the ſeveral means that may be employed for the cure of the colic, conſidered as a genus; but before I quit this ſubject, it may be expected that I ſhould take notice of ſome of the ſpecies which may ſeem to require a particular conſideration. In this view it may be expected that I ſhould eſpecially take notice of that ſpecies named the Colic of Poitou, and particularly known in England by the name of the Devonſhire Colic.

MCCCCLII.

MCCCCLII.

This ſpecies of the diſeaſe is certainly a peculiar one, both in reſpect of its cauſe and its effects; but, as to the firſt, it has been lately ſo much the ſubject of inveſtigation, and is ſo well aſcertained by the learned phyſicians Sir George Baker and Dr Hardy, that it is unneceſſary for me to ſay any thing of it here.

With reſpect to the cure of it, ſo far as it appears in the form of a colic, my want of experience concerning it does not allow me to ſpeak with any confidence on the ſubject; but, ſo far as I can learn from others, it appears to me, that it is to be treated by all the ſeveral means that I have propoſed above for the cure of colic in general.

How far the peculiar effects of this diſeaſe are to be certainly foreſeen and obviated, I have not properly learned; and I

muſt

muſt leave the matter to be determined by thoſe who have had ſufficient experience in it.

CHAP.

CHAP. X.

OF THE CHOLERA.

MCCCCLIII.

IN this diſeaſe, a vomiting and purging concurring together, or frequently alternating with one another, are the chief ſymptoms. The matter rejected both upwards and downwards appears manifeſtly to conſiſt chiefly of bile.

MCCCCLIV.

MCCCCLIV.

From this laſt circumſtance I conclude, that the diſeaſe depends upon an increaſed ſecretion of bile, and its copious effuſion into the alimentary canal; and, as in this it irritates and excites the motions above mentioned, I infer, that the bile thus effuſed in larger quantity is at the ſame time alſo of a more acrid quality. This appears likewiſe from the violent and very painful gripings that attend the diſeaſe, and which we can impute only to the violent ſpaſmodic contractions of the inteſtines that take place here. Theſe ſpaſms are commonly communicated to the abdominal muſcles, and very frequently to thoſe of the extremities.

MCCCCLV.

In the manner now deſcribed, the diſ-

eaſe frequently proceeds with great violence, till the ſtrength of the patient is greatly, and often ſuddenly, weakened; while a coldneſs of the extremities, cold ſweats, and faintings, coming on, an end is put to the patient's life, ſometimes in the courſe of one day. In other caſes the diſeaſe is leſs violent, continues for a day or two, and then ceaſes by degrees; though ſuch recoveries ſeldom happen without the aſſiſtance of remedies.

MCCCCLVI.

The attacks of this diſeaſe are ſeldom accompanied with any ſymptoms of pyrexia; and though, during the courſe of it, both the pulſe and reſpiration are hurried and irregular, yet theſe ſymptoms are generally ſo entirely removed by the remedies that quiet the ſpaſmodic affections peculiar to the diſeaſe,

as to leave no ground for ſuppoſing that it had been accompanied by any proper pyrexia.

MCCCCLVII.

This is a diſeaſe attending a very warm ſtate of the air; and, in very warm climates, it may perhaps appear at any time of the year: but even in ſuch climates it is moſt frequent during their warmeſt ſeaſons; and in temperate climates, it appears only in the warm ſeaſons. Dr Sydenham conſidered the appearances of this diſeaſe in England to be confined to the month of Auguſt; but he himſelf obſerved it to appear ſometimes towards the end of ſummer, when the ſeaſon was unuſually warm; and that, in proportion to the heat, the violence of the diſeaſe was greater. Others have obſerved that it appeared more early in ſummer, and always

ways ſooner or later, according as the great heats ſooner or later ſet in.

MCCCCLVIII.

From all theſe circumſtances, it is, I think, very evident, that this diſeaſe is the effect of a warm atmoſphere, producing ſome change in the ſtate of the bile in the human body: and the change may conſiſt, either in the matter of the bile being rendered more acrid, and thereby fitted to excite a more copious ſecretion; or, in the ſame matter, its being prepared to paſs off in larger quantity than uſual.

MCCCCLIX.

It has been remarked, that in warm climates and ſeaſons, after extremely hot and dry weather, a fall of rain cooling the at-

mosphere seems especially to bring on this disease; and it is very probable that an obstructed perspiration may have also a share in this, though it is also certain that the disease does appear when no change in the temperature of the air, nor any application of cold, has been obser-ved.

MCCCCLX.

It is possible, that, in some cases, the heat of the season may give only a predis-position, and that the disease may be ex-cited by certain ingesta or other causes; but it is equally certain, that the disease has occurred without any previous change or error, either in diet, or in the manner of life, that could be observed.

MCCCCLXI.

The Nosologists have constituted a Genus under the title of Cholera, and under this have arranged as species every affection in which a vomiting and purging of any kind happened to concur. In many of these species, however, the matter evacuated is not bilious; nor does the evacuation proceed from any cause in the state of the atmosphere. Further, in many of these species also, the vomiting which occurs is not an essential, but merely an accidental symptom from the particular violence of the disease. The appellation of Cholera therefore should, in my opinion, be confined to the disease I have described above; which by its peculiar cause, and perhaps also by its symptoms, is very different from all the other species that have been associated with it I believe that all the other species arranged under the title

of Cholera by Sauvages or Sagar, may be properly enough referred to the genus of Diarrhœa; which we are to treat of in the next chapter.

The diſtinction I have endeavoured to eſtabliſh between the proper Cholera, and the other diſeaſes that have ſometimes got the ſame appellation, will, as I judge, ſuperſede the queſtion, Whether the Cholera, in temperate climates, happens at any other ſeaſon than that above aſſigned.

MCCCCLXII.

In the caſe of a genuine cholera, the cure of it has been long eſtabliſhed by experience.

In the beginning of the diſeaſe, the evacuation of the redundant bile is to be favoured by the plentiful exhibition of mild diluents, both given by the mouth, and injected by the anus; and all evacuant

medi-

medicines, employed in either way, are not only ſuperfluous, but commonly hurtful.

MCCCCLXIII.

When the redundant bile appears to be ſufficiently waſhed out, and even before that, if the ſpaſmodic affections of the alimentary canal become very violent, and are communicated in a conſiderable degree to other parts of the body, or when a dangerous debility ſeems to be induced, the irritation is to be immediately obviated by opiates, in ſufficiently large doſes, but in ſmall bulk, and given either by the mouth or by glyſter.

MCCCCLXIV.

Though the patient be in this manner relieved, it frequently happens, that when

the operation of the opium is over, the diſeaſe ſhows a tendency to return; and, for at leaſt ſome days after the firſt attack, the irritability of the inteſtines, and their diſpoſition to fall into painful ſpaſmodic contractions, ſeem to continue. In this ſituation, the repetition of the opiates, for perhaps ſeveral days, may come to be neceſſary; and as the debility commonly induced by the diſeaſe favours the diſpoſition to ſpaſmodic affections, it is often uſeful and neceſſary, together with the opiates, to employ the tonic powers of the Peruvian bark.

CHAP.

CHAP. XI.

OF DIARRHOEA OR LOOSENESS.

MCCCCLXV.

THIS diſeaſe conſiſts in evacuations by ſtool, more frequent and of more liquid matter than uſual. This leading and characteriſtic ſymptom is ſo diverſified in its degree, in its cauſes, and in the variety of matter evacuated, that it is almoſt impoſſible to give any general hiſtory of the diſeaſe.

MCCCCLXVI.

MCCCCLXVI.

It is to be diſtinguiſhed from dyſentery, by not being contagious; by being generally without fever; and by being with the evacuation of the natural excrements, which are, at leaſt for ſome time, retained in dyſentery. The two diſeaſes have been commonly diſtinguiſhed by the gripings being more violent in the dyſentery; and they are commonly leſs violent and leſs frequent in diarrhœa; but as they frequently do occur in this alſo, and ſometimes to a conſiderable degree, ſo they do not afford any proper diſtinction.

MCCCCLXVII.

A diarrhœa is to be diſtinguiſhed from cholera chiefly by the difference of their cauſes; which, in cholera, is of one peculiar kind; but in diarrhœa is prodigiouſly diver-

diverſified, as we ſhall ſee preſently. It has been common to diſtinguiſh cholera by the evacuation downwards being of bilious matter, and by this being always accompanied with a vomiting of the ſame kind; but it does not univerſally apply, as a diarrhœa is ſometimes attended with vomiting, and even of bilious matter.

MCCCCLXVIII.

The diſeaſe of diarrhœa, thus diſtinguiſhed, is very greatly diverſified; but in all caſes, the frequency of ſtools is to be imputed to a preternatural increaſe of the periſtaltic motion in the whole, or at leaſt in a conſiderable portion, of the inteſtinal canal. This increaſed action is in different degrees, is often convulſive and ſpaſmodic, and at any rate is a *motus abnormis*: for which reaſon, in the Methodical Noſology, I have referred it to the order of

of Spaſmi, and accordingly treat of it in this place.

MCCCCLXIX.

Upon the ſame ground, as I conſider the diſeaſe named Lientery to be an increaſed periſtaltic motion over the whole of the inteſtinal canal, ariſing from a peculiar irritability, I have conſidered it as merely a ſpecies of diarrhœa. The idea of a laxity of the inteſtinal canal being the cauſe either of lientery, or other ſpecies of diarrhœa, appears to me to be without foundation, except in the ſingle caſe of frequent liquid ſtools from a palſy of the *ſphincter ani*.

MCCCCLXX.

The increaſed action of the periſtaltic motion, I conſider as always the chief part

of

of the proximate cauſe of diarrhœa: but the diſeaſe is further, and indeed chiefly, diverſified by the different cauſes of this increaſed action; which we are now to inquire into.

MCCCCLXXI.

The ſeveral cauſes of the increaſed action of the inteſtines may be referred, I think, in the firſt place, to two general heads.

The *firſt* is, of the diſeaſes of certain parts of the body which, either from a conſent of the inteſtines with theſe parts, or from the relation which the inteſtines have to the whole ſyſtem, occaſion an increaſed action in the inteſtines, without the transference of any ſtimulant matter from the primary diſeaſed part to them.

The *ſecond* head of the cauſes of the increaſed action of the inteſtines is of the

ſtimuli

ſtimuli of various kinds, which are applied directly to the inteſtines themſelves.

MCCCCLXXII.

That affections of other parts of the ſyſtem may affect the inteſtines without the transference or application of any ſtimulant matter, we learn from hence, that the paſſions of the mind do in ſome perſons excite diarhœa.

MCCCCLXXIII.

That diſeaſes in other parts may in like manner affect the inteſtines, appears from the dentition of infants frequently exciting diarrhœa. I believe that the gout often affords another inſtance of the ſame kind; and probably there are others alſo, though not well aſcertained.

MCCCCLXXIV.

MCCCCLXXIV.

The ſtimuli (MCCCCLXXI.) which may be applied to the inteſtines are of very various kinds; and are either,

1. Matters introduced by the mouth.

2. Matters poured into the inteſtines by the ſeveral excretories opening into them.

3. Matters poured from certain preternatural openings made into them in certain diſeaſes.

MCCCCLXXV.

Of thoſe (MCCCCLXXIV. 1.) introduced by the mouth, the firſt to be mentioned are the aliments commonly taken in. Too great a quantity of theſe taken in, often prevents their due digeſtion in the ſtomach; and by being thus ſent in their crude, and probably acrid, ſtate to the in-

inteſtines, they frequently excite diarrhœa.

The ſame aliments, though in proper quantity, yet having too great a proportion, as frequently happens, of ſaline or ſaccharine matter along with them, prove ſtimulant to the inteſtines, and excite diarrhœa.

But our aliments prove eſpecially the cauſes of diarrrhœa, according as they, from their own nature, or from the weakneſs of the ſtomach, are diſpoſed to undergo an undue degree of fermentation there, and thereby become ſtimulant to the inteſtines. Thus aceſcent aliments are ready to produce diarrhœa; but whether from their having any directly purgative quality, or only as mixed in an over proportion with the bile, is not well determined.

MCCCCLXXVI.

Not only the acescent, but also the putrescent disposition of the aliments, seems to occasion a diarrhœa; and it appears that even the effluvia of putrid bodies, taken in any way in large quantity, have the same effect.

Are oils or fats, taken in as a part of our aliments, ever the cause of diarrhœa? and if so, in what manner do they operate?

MCCCCLXXVII.

The other matters introduced by the mouth, which may be causes of diarrhœa, are those thrown in either as medicines, or poisons that have the faculty of stimulating the alimentary canal. Thus, in the list of the Materia Medica, we have a long catalogue of those named purgatives; and in the list of poisons, we have many pos-

ſeſſed of the ſame quality. The former, given in a certain quantity, occaſion a temporary diarrhœa; and given in very large doſes, may occaſion it in exceſs, and continue it longer than uſual, producing that ſpecies of diarrhœa named a Hypercatharſis.

MCCCCLXXVIII.

The matters (MCCCCLXXIV. 2.) poured into the cavity of the inteſtines from the excretories opening into them, and which may occaſion diarrhœa, are either thoſe from the pancreatic or biliary duct, or thoſe from the excretories in the coats of the inteſtines themſelves.

MCCCCLXXIX.

What changes may happen in the pancreatic juice, I do not exactly know; but I ſuppoſe

ſuppoſe that an acrid fluid may iſſue from the pancreas, even while ſtill entire in its ſtructure; but more eſpecially, when it is in a ſuppurated, ſcirrhous, or cancerous ſtate, that a very acrid matter may be poured out by the pancreatic duct, and occaſion diarrhœa.

MCCCCLXXX.

We know well, that from the biliary duct the bile may be poured out in greater quantity than uſual; and there is little doubt of its being alſo ſometimes poured out of a more than ordinary acrid quality. It is very probable, that in both ways the bile is frequently a cauſe of diarrhœa.

Though I have ſaid above that diarrhœa may be commonly diſtinguiſhed from cholera, I muſt admit here, that as the cauſes producing that ſtate of the bile which occaſions cholera, may occur in all the different

different poſſible degrees of force, ſo as, on one occaſion, to produce the moſt violent and diſtinctly marked cholera; but, upon another, to produce only the gentleſt diarrhœa; which, however, will be the ſame diſeaſe, only varying in degree: So I think it probable, that in warm climates, and in warm ſeaſons, a *diarrhœa bilioſa* of this kind may frequently occur, not to be always certainly diſtinguiſhed from cholera.

However this may be, it is ſufficiently probable, that, in ſome caſes, the bile, without having been acted upon by the heat of the climate or ſeaſon, may be redundant and acrid, and prove therefore a particular cauſe of diarrhœa.

MCCCCLXXXI.

Beſide bile from the ſeveral cauſes and in the conditions mentioned, the biliary duct

duct may pour out pus, or other matter, from abſceſſes in the liver, which may be the cauſe of diarrhœa.

Practical writers take notice of a diarrhœa wherein a thin and bloody liquid is diſcharged; which they ſuppoſe to have proceeded from the liver, and have therefore given the diſeaſe the name of Hepatirrhœa: but we have not met with any inſtance of this kind; and therefore cannot properly ſay any thing concerning it.

MCCCCLXXXII.

A ſecond ſet of excretories, from which matter is poured into the cavity of the inteſtines, are thoſe from the coats of the inteſtines themſelves; and are either the exhalants proceeding directly from the extremities of arteries, or the excretories from the mucous follicles: and both theſe ſources occur in prodigious number over

the internal ſurface of the whole inteſti-nal canal. It is probable that it is chiefly the effuſion from theſe ſources which, in moſt inſtances, gives the matter of the li-quid ſtools occurring in diarrhœa.

MCCCCLXXXIII.

The matter from both ſources may be poured out in larger quantity than uſual, merely by the increaſed action of the in-teſtines, whether that be excited by the paſſions of the mind (MCCCCXXII.), by diſeaſes in other parts of the ſyſtem (MCCCCLXXI. 1.), or by the various ſti-mulants mentioned MCCCCLXXV. and following; or the quantity of matter pour-ed out may be increaſed, not ſo much by the increaſed action of the inteſtines, as by an increaſed afflux of fluids from other parts of the ſyſtem.

Thus, cold applied to the ſurface of the body,

body, and ſuppreſſing perſpiration, may determine a greater quantity of fluids to the inteſtines.

Thus, in the *iſchuria renalis*, the urine taken into the blood-veſſels is ſometimes determined to paſs off again by the inteſtines.

In like manner, pus or ſerum may be abſorbed from the cavities in which they have been ſtagnant, and be again poured out into the inteſtines, as frequently happens, in particular with reſpect to the water of dropſies.

MCCCCLXXXIV.

It is to be obſerved here, that a diarrhœa may be excited not only by a copious afflux of fluids from other parts of the ſyſtem, but likewiſe by the mere determination of various acrid matters from the maſs of blood into the cavity of the inteſtines. Thus it is ſuppoſed that the morbific

bific matter of fevers is ſometimes thrown out into the cavity of the inteſtines, and gives a critical diarrhœa: and whether I do or do not admit the doctrine of critical evacuations, I think it is probable that the morbific matter of the exanthemata is frequently thrown upon the inteſtines, and occaſions diarrhœa.

MCCCCLXXXV.

It is to me further probable, that the putreſcent matter diffuſed over the maſs of blood in putrid diſeaſes, is frequently poured out by the exhalants into the inteſtines, and proves there the cauſe, at leaſt in part, of the diarrhœa ſo commonly attending theſe diſeaſes.

MCCCCLXXXVI.

Upon this ſubject of the matters poured

ed into the cavity of the inteſtines, I have chiefly conſidered them as poured out in unuſual quantity: but it is probable that, for the moſt part, they are alſo changed in their quality, and become of a more acrid and ſtimulant nature; upon which account eſpecially it is, that they excite, or at leaſt increaſe, a diarrhœa.

MCCCCLXXXVII.

How far, and in what manner, the exhalant fluid may be changed in its nature and quality, we do not certainly know: but with reſpect to the fluid from the mucous excretories, we know, that, when poured out in unuſual quantity, it is commonly, at the ſame time, in a more liquid and acrid form; and may prove, therefore, conſiderably irritating.

MCCCCLXXXVIII.

MCCCCLXXXVIII.

Though the copious effuſion of a more liquid and acrid matter from the mucous excretories, be probably owing to the matter being poured out immediately as it is ſecreted from the blood into the mucous follicles, without being allowed to ſtagnate in the latter, ſo as to acquire that milder quality and thicker conſiſtence we commonly find in the mucus in its natural ſtate; and although we might ſuppoſe that the excretions of a thin and acrid fluid ſhould always be the effect of every determination to the mucous follicles, and of every ſtimulant applied to them: yet it is certain, that the reverſe is ſometimes the caſe; and that, from the mucous follicles, there is frequently an increaſed excretion of a mucus, which appears in its proper form of a mild, viſcid, and thickiſh matter. This commonly occurs in the caſe of dyſentery;

ſentery; and it has been obſerved to give a ſpecies of diarrhœa, which has been properly named the *Diarrhœa Mucoſa*.

MCCCCLXXXIX.

A third ſource of matter poured into the cavity of the inteſtines, and occaſioning diarrhœa (MCCCCLXXIV. 3.), is from thoſe preternatural openings produced by diſeaſes in the inteſtines or neighbouring parts. Thus the blood-veſſels on the internal ſurface of the inteſtines may be opened by eroſion, rupture, or anaſtomoſis, and pour into the cavity their blood, which, either by its quantity or by its acrimony, whether inherent, or acquired by ſtagnation, may ſometimes give a diarrhœa evacuating bloody matter. This is what I think happens in that diſeaſe which has been called the *Melæna* or *Morbus Niger*.

MCCCCXC.

MCCCCXC.

Another preternatural ſource of matter poured into the cavity of the inteſtines, is the rupture of abſceſſes ſeated either in the coats of the inteſtines themſelves, or in any of the contiguous viſcera, which, during an inflamed ſtate, had formed an adheſion with ſome part of the inteſtines. The matter thus poured into their cavity may be various; purulent, or ſanious, or both together, mixed at the ſame time with more or leſs of blood; and in each of theſe ſtates may be a cauſe of diarrhœa.

MCCCCXCI.

Amongſt the ſtimuli that may be directly applied to the inteſtines, and which, by increaſing their periſtaltic motion, may occaſion diarrhœa, I muſt not omit to men-

mention worms, as having frequently that effect.

MCCCCXCII.

I muſt alſo mention here a ſtate of the inteſtines, wherein their periſtaltic motion is preternaturally increaſed, and a diarrhœa produced; and that is, when they are affected with an erythematic inflammation. With reſpect to the exiſtence of ſuch a ſtate, and its occaſioning diarrhœa, ſee what is ſaid above in CCCXCVIII. and following. Whether it is to be conſidered as a particular and diſtinct caſe of diarrhœa, or is always the ſame with ſome of thoſe produced by one or other of the cauſes above mentioned, I have not been able to determine.

MCCCCXCIII.

MCCCCXCIII.

Laſtly, by an accumulation of alimentary or of other matter poured into the cavity of the inteſtines from ſeveral of the ſources above mentioned, a diarrhœa may be eſpecially occaſioned when the abſorption of the lacteals, or of other abſorbents, is prevented, either by an obſtruction of their orifices, or by an obſtruction of the meſenteric glands, through which alone the abſorbed fluids can be tranſmitted.

In one inſtance of this kind, when the chyle prepared in the ſtomach and duodenum is not abſorbed in the courſe of the inteſtines, but paſſes off in conſiderable quantity by the anus, the diſeaſe has been named *Morbus Cœliacus*, or ſimply and more properly *Cœliaca*; which accordingly I have conſidered as a ſpecies of diarrhœa.

MCCCCXCIV.

I have thus endeavoured to point out the various ſpecies of diſeaſe that may come under the general appellation of Diarrhœa; and from that enumeration it will appear, that many, and indeed the greater part of the caſes of diarrhœa, are to be conſidered as ſympathetic affections, and to be cured only by curing the primary diſeaſe upon which they depend; of which, however, I cannot properly treat here. From our enumeration it will alſo appear, that many of the caſes of diarrhœa which may be conſidered as idiopathic, will not require my ſaying much of them here. In many inſtances, the diſeaſe is aſcertained, and alſo the cauſe aſſigned, by the condition of the matter evacuated; ſo that what is neceſſary to correct or remove it will be ſufficiently obvious to practitioners of any knowledge. In ſhort, I do not find

find that I can offer any general plan for the cure of diarrhœa; and all that I can propoſe to do on this ſubject, is to give ſome general remarks on the practice that has been commonly followed in the cure of this diſeaſe.

MCCCCXCV.

The practice in this diſeaſe has chiefly proceeded upon the ſuppoſition of an acrimony in the fluids, or of a laxity in the ſimple and moving fibres of the inteſtines; and the remedies employed have accordingly been, Correctors of particular acrimony, general demulcents, evacuants by vomiting or purging, aſtringents, or opiates. Upon each of theſe kinds of remedy I ſhall now offer ſome remarks.

MCCCCXCVI.

MCCCCXCVI.

An acid acrimony is, upon ſeveral occaſions, the cauſe of diarrhœa, particularly in children; and in ſuch caſes the abſorbent earths have been very properly employed. The common, however, and promiſcuous uſe of theſe, has been very injudicious; and where there is any putreſcency, they muſt be hurtful.

MCCCCXCVII.

The caſes in which there is a putrid or putreſcent acrimony prevailing, have been, I think, too ſeldom taken notice of; and, therefore, the uſe of acids too ſeldom admitted. The acrimony to be ſuſpected in bilious caſes, is probably of the putreſcent kind.

MCCCCXCVIII.

The general correctors of acrimony are the mild diluents and demulcents. The former have not been ſo much employed in diarrhœa as they ought; for, joined with demulcents, they very much increaſe the effects of the latter: and although the demulcents, both mucilaginous and oily, may by themſelves be uſeful, yet without the aſſiſtance of diluents they can hardly be introduced in ſuch quantity as to anſwer the purpoſe.

MCCCCXCIX.

As indigeſtion and crudities preſent in the ſtomach, are ſo often the cauſe of diarrhœa, vomiting muſt therefore be frequently very uſeful in this diſeaſe.

In like manner, when the diſeaſe proceeds, as it often does, from obſtructed perſpiration,

ſpiration, and increaſed afflux of fluids to the inteſtines, vomiting is perhaps the moſt effectual means of reſtoring the determination of the fluids to the ſurface of the body.

It is poſſible alſo, that vomiting may give ſome inverſion of the periſtaltic motion, which is determined too much downwards in diarrhœa; ſo that upon the whole it is a remedy which may be very generally uſeful in this diſeaſe.

MD.

Purging has been ſuppoſed to be more univerſally neceſſary, and has been more generally practiſed. This, however, in my opinion, proceeds upon very miſtaken notions with reſpect to the diſeaſe; and ſuch a practice ſeems to me for the moſt part ſuperfluous, and in many caſes very hurtful. It goes upon the ſuppoſition of an acrimony

preſent in the inteſtines, that ought to be carried out by purging: but, if that acrimony has either been introduced by the mouth, or brought into the inteſtines from other parts of the body, purging can neither be a means of correcting nor of exhauſting it; and muſt rather have the effect of increaſing its afflux, and of aggravating its effects. From whatever ſource the acrimony which can excite a diarrhœa proceeds, it may be ſuppoſed ſufficient to evacuate itſelf, ſo far as that can be done by purging; and as in cholera, ſo in the ſame kind of diarrhœa, it will be more proper to aſſiſt the evacuation by diluents and demulcents, than to increaſe the irritation by purgatives.

MDI.

If, then, the uſe of purgatives in diarrhœa may be conſidered, even when an acrimony is preſent, as ſuperfluous, there-

there are many other cafes in which it may be extremely hurtful. If the irritability of the inteftines fhall, from affections in other parts of the fyftem, or other caufes, have been already very much increafed, purgatives muft neceffarily aggravate the difeafe. In the cafe of lientery, nobody thinks of giving a purgative; and in many cafes of diarrhœa approaching to that, they muft be equally improper. I have already obferved, that when diarrhœa proceeds from an afflux of fluids to the inteftines, whether in too great quantity, or of an acrid quality, purgatives may be hurtful; and whoever, therefore, confiders the numerous and various fources from which acrid matter may be poured into the cavity of the inteftines, will readily perceive, that, in many cafes of diarrhœa, purgatives may be extremely pernicious.

There is one cafe in particular to be ta-

ken notice of. When, from a general and acrid diſſolution of the blood, the ſerous fluids run off too copiouſly into the cavity of the inteſtines, and excite that diarrhœa which attends the advanced ſtate of hectic fever, and is properly called a Colliquative Diarrhœa; I have, in ſuch caſes, often ſeen purgatives given with the moſt baneful effects.

There is ſtill another caſe of diarrhœa in which purgatives are pernicious; and that is, when the diſeaſe depends, as we have alleged it ſometimes may, upon an erythemathic inflammation of the inteſtines.

I need hardly add, that if there be a caſe of diarrhœa depending upon a laxity of the ſolids, purgatives cannot there be of any ſervice, and may do much harm. Upon the whole, it will, I think, appear, that the uſe of purgatives in diarrhœa is very much limited; and that the promiſ-

miſcuous uſe of them, which has been ſo common, is injudicious, and often pernicious. I believe the practice has been chiefly owing to the uſe of purgatives in dyſenteric caſes, in which they are truly uſeful; becauſe, contrary to the caſe of diarrhœa, there is in dyſentery a conſiderable conſtriction of the inteſtines.

MDII.

Another ſet of remedies employed in diarrhœa are aſtringents. There has been ſome heſitation about the employment of theſe in recent caſes, upon the ſuppoſition that they might occaſion the retention of an acrid matter that ſhould be thrown out. I cannot, however, well underſtand or aſſign the caſes in which ſuch caution is neceſſary; and I think that the power of aſtringents is ſeldom ſo great as to render their uſe very dangerous. The only diffi-

culty which has occurred to me, with reſpect to their uſe, has been to judge of the circumſtances to which they are eſpecially adapted. It appears to me to be only in thoſe where the irritability of the inteſtines depends upon a loſs of tone: and this, I think, may occur either from the debility of the whole ſyſtem, or from cauſes acting on the inteſtines alone. All violent or long-continued ſpaſmodic and convulſive affections of the inteſtinal canal neceſſarily induce a debility there; and ſuch cauſes often take place, from violent irritation, in colic, dyſentery, cholera, and diarrhœa.

MDIII.

The laſt of the remedies of diarrhœa that remain to be mentioned are opiates. The ſame objections have been made to the uſe of theſe, in recent caſes of diarrhœa,

rhœa, as to that of aſtringents; but on no good grounds: for the effect of opiates, as aſtringent, is never very permanent; and an evacuation depending upon irritation, though it may be for ſome time ſuſpended by opiates, yet always returns very ſoon. It is only by taking off irritability that opiates are uſeful in diarrhœa; and therefore, when the diſeaſe depends upon an increaſe of irritability alone, or when, though proceeding from irritation, that irritation is corrected or exhauſted, opiates are the moſt uſeful and certain remedy. And though opiates are not ſuited to correct or remove an irritation applied, they are often of great benefit in ſuſpending the effects of that irritation whenever theſe are violent: and, upon the whole, it will appear, that opiates may be very frequently, and with great propriety, employed in the cure of diarrhœa.

CHAP.

CHAP. XII.

OF THE DIABETES.

MDIV.

THIS diſeaſe conſiſts in the voiding of an unuſually large quantity of urine.

As hardly any ſecretion can be increaſed without an increaſed action of the veſſels concerned in it, and as ſome inſtances of this diſeaſe are attended with affections manifeſtly ſpaſmodic, I have had no doubt of arranging the diabetes under the order of Spaſmi.

MDV.

MDV.

This diſeaſe is always accompanied with a great degree of thirſt, and therefore with the taking in of a great quantity of drink. This in ſome meaſure accounts for the very extraordinary quantities of urine voided: but ſtill, independent of this, a peculiar diſeaſe certainly takes place; as the quantity of urine voided does almoſt always exceed the whole of the liquids, and ſometimes the whole of both ſolids and liquids, taken in.

MDVI.

The urine voided in this diſeaſe is always very clear, and at firſt ſight appears entirely without any colour; but, viewed in a certain light, it generally appears to be ſlightly tinged with a yellowiſh green, and in this reſpect has been very properly com-

compared to a ſolution of honey in a large proportion of water.

Examined by the taſte, it is very generally found to be more or leſs ſweet; and many experiments that have now been made in different inſtances of the diſeaſe, ſhow clearly that ſuch urine contains, in conſiderable quantity, a ſaccharine matter which appears to be very exactly of the nature of common ſugar.

MDVII.

Doctor Willis ſeems to me to have been the firſt who took notice of the ſweetneſs of the urine in diabetes, and almoſt every phyſician of England has ſince taken notice of the ſame. It is to be doubted, indeed, if there is any caſe of idiopathic diabetes in which the urine is of a different kind. Though neither the ancients, nor, in the other countries of Europe, the moderns, till

till the latter were directed to it by the English, have taken notice of the ſweetneſs of the urine, it does not perſuade me, that either in ancient or in modern times the urine in diabetes was of another kind. I myſelf, indeed, think I have met with one inſtance of diabetes in which the urine was perfectly inſipid; and it would ſeem that a like obſervation had occurred to Dr Martin Liſter. I am perſuaded, however, that ſuch inſtances are very rare; and that the other is by much the more common, and perhaps the almoſt univerſal occurrence. I judge, therefore, that the preſence of ſuch a ſaccharine matter may be conſidered as the principal circumſtance in idiopathic diabetes; and it gives at leaſt the only caſe of that diſeaſe that I can properly treat of here, for I am only certain that what I am further to mention relates to ſuch a caſe.

MDVIII.

MDVIII.

The antecedents of this diſeaſe, and conſequently the remote cauſes of it, have not been well aſcertained. It may be true that it frequently happens to men who, for a long time before, had been intemperate in drinking; that it happens to perſons of a broken conſtitution, or who, as we often expreſs it, are in a cachectic ſtate; that it ſometimes follows intermittent fevers; and that it has often occurred from exceſs in the drinking of mineral waters. But none of theſe cauſes apply very generally to the caſes that occur: ſuch caſes are not always, nor even frequently, followed by a diabetes; and there are many inſtances of diabetes which could not be referred to any of them. In moſt of the caſes of this diſeaſe which I have met with, I could not refer it to any particular cauſe.

MDIX.

This diſeaſe commonly comes on ſlowly, and almoſt imperceptibly, without any previous diſorder. It often ariſes to a conſiderable degree, and ſubſiſts long without being accompanied with evident diſorder in any particular part of the ſyſtem. The great thirſt which always, and the voracious appetite which frequently occurs in it, are often the only remarkable ſymptoms. Under the continuance of the diſeaſe, the body is often greatly emaciated; and a great weakneſs alſo prevails. The pulſe is commonly frequent; and an obſcure fever is for the moſt part preſent. When the diſeaſe proves fatal, it generally ends with a fever, in many circumſtances, particulary thoſe of emaciation and debility, reſembling a hectic.

MDX.

MDX.

The proximate cauſe of this diſeaſe is not certainly or clearly known. It ſeems to have been ſometimes connected with calculous affections of the kidneys; and it is poſſible, that an irritation applied there may increaſe the ſecretion of urine. It perhaps often does ſo; but how it ſhould produce the ſingular change that takes place in the ſtate of the urine, is not to be eaſily explained. It certainly often happens, that calculous matters are long preſent in the urinary paſſages, without having any ſuch effect as that of producing diabetes in any ſhape.

Some have ſuppoſed that the diſeaſe occurs from a relaxed ſtate of the ſecretory veſſels of the kidneys; and indeed the diſſections of perſons who had died of this diſeaſe have ſhown the kidneys in a very flaccid ſtate. This, however, is probably

to be confidered as rather the effect than the caufe of the difeafe.

That no topical affection of the kidneys has a fhare in producing this difeafe, and that a fault in the affimilation of the fluids is rather to be blamed, I conclude from hence, that even the folid food taken in, increafes the quantity of the urine voided, at the fame time with an increafe of the faccharine matter above mentioned.

MDXI.

The diabetes has been fuppofed to be owing to a certain ftate of the bile; and it is true, that this difeafe has fometimes occurred in perfons who were at the fame time affected with difeafes of the liver: but this concurrence does not often take place; and the diabetes frequently occurs feparately from any affection of the liver. In twenty inftances of diabetes which I

have ſeen, there was not in any one of them any evident affection of the liver.

The explanation that has been offered of the nature and operation of the bile, in producing dibaetes, is very hypothetical, and nowiſe ſatisfying.

MDXII.

As I have already ſaid, I think it probable, that in moſt caſes the proximate cauſe of this diſeaſe is ſome fault in the aſſimilatory powers, or in thoſe employed in converting alimentary matters into the proper animal fluids. This I formerly hinted to Dr Dobſon, and it has been proſecuted and publiſhed by him; but I muſt own, that it is a theory embarraſſed with ſome difficulties which I cannot at preſent very well remove.

MDXIII.

The proximate cauſe of diabetes being ſo little known or aſcertained, I cannot propoſe any rational method of cure in the diſeaſe. From the teſtimony of ſeveral authors, I believe that the diſeaſe has been cured: but I believe alſo, that this has ſeldom happened; and when the diſeaſe has been cured, I doubt much if it was effected by the ſeveral remedies to which theſe cures have been aſcribed. In all the inſtances of this diſeaſe which I myſelf have ſeen, and in ſeveral others of which I have been informed, no cure of it has ever been made in Scotland, though many inſtances of it have occurred, and in moſt of them the remedies recommended by authors have been diligently employed. I cannot, therefore, with any advantage, enter into a detail of theſe remedies; and as the diſeaſe, together with its ſeveral circumſtances,

when they ſhall hereafter occur, is likely to become the ſubject of diligent inveſtigation, I avoid going farther at preſent, and judge it prudent to ſuſpend my opinion till I ſhall have more obſervations and experiments upon which I can form it more clearly.

CHAP.

CHAP. XIII.

OF THE HYSTERIA, OR THE HYSTERIC DISEASE.

MDXIV.

THE many and various ſymptoms which have been ſuppoſed to belong to a diſeaſe under this appellation, render it extremely difficult to give a general character or definition of it. It is, however, proper in all caſes to attempt ſome general idea; and therefore, by taking the moſt common form, and that concurrence of

ſymptoms by which it is principally diſtinguiſhed, I have formed a character in my ſyſtem of Methodical Noſology, and ſhall here endeavour to illuſtrate it by giving a more full hiſtory of the phenomena.

MDXV.

The diſeaſe attacks in paroxyſms or fits. Theſe commonly begin by ſome pain and fulneſs felt in the left ſide of the belly. From this a ball ſeems to move with a grumbling noiſe into the other parts of the belly; and, making as it were various convolutions there, ſeems to move into the ſtomach; and more diſtinctly ſtill riſes up to the top of the gullet, where it remains for ſome time, and by its preſſure upon the larynx gives a ſenſe of ſuffocation. By the time that the diſeaſe has proceeded thus far, the patient is affected with a ſtupor and

and inſenſibility, while at the ſame time the body is agitated with various convulſions. The trunk of the body is wreathed to and fro, and the limbs are variouſly agitated; commonly the convulſive motion of one arm and hand, is that of beating, with the cloſed fiſt, upon the breaſt very violently and repeatedly. This ſtate continues for ſome time, and has during that time ſome remiſſions and renewals of the convulſive motions; but they at length ceaſe, leaving the patient in a ſtupid and ſeemingly ſleeping ſtate. More or leſs ſuddenly, and frequently with repeated ſighing and ſobbing, together with a murmuring noiſe in the belly, the patient returns to the exerciſe of ſenſe and motion, but generally without any recollection of the ſeveral circumſtances that had taken place during the fit.

MDXVI.

This is the form of what is called an *hyſteric paroxyſm*, and is the moſt common form; but its paroxyſms are conſiderably varied in different perſons, and even in the ſame perſon at different times. It differs, by having more or fewer of the circumſtances abovementioned; by theſe circumſtances being more or leſs violent; and by the different duration of the whole fit.

Before the fit, there is ſometimes a ſudden and unuſually large flow of limpid urine. At the coming on of the fit, the ſtomach is ſometimes affected with vomiting, the lungs with conſiderable difficulty of breathing, and the heart with palpitations. During the fit, the whole of the belly, and particularly the navel, is drawn ſtrongly inwards; the ſphincter ani is ſometimes ſo firmly conſtricted as not to admit a ſmall glyſter-pipe, and there is at the

ſame

ſame time an entire ſuppreſſion of urine. Such fits are, from time to time, ready to recur; and during the intervals, the patients are liable to involuntary motions, to fits of laughing and crying, with ſudden tranſitions from the one to the other; while ſometimes falſe imaginations, and ſome degree of delirium, alſo occur.

MDXVII.

Theſe affections have been ſuppoſed peculiar to the female ſex; and indeed they moſt commonly appear in females: but they ſometimes, though rarely, attack alſo the male ſex; never, however, that I have obſerved, in the ſame exquiſite degree.

In the female ſex, the diſeaſe occurs eſpecially from the age of puberty to that of thirty-five years; and though it does ſometimes, yet very ſeldom appears before the former or after the latter of theſe periods.

At all ages, the time at which it moſt readily occurs is that of the menſtrual period.

The diſeaſe more eſpecially affects the females of the moſt exquiſitely ſanguine and plethoric habits, and frequently affects thoſe of the moſt robuſt and maſculine conſtitutions.

It affects the barren more than the breeding women, and therefore frequently young widows.

It occurs eſpecially in thoſe females who are liable to the Nymphomania; and the Noſologiſts have properly enough marked one of the varieties of this diſeaſe by the title of *Hyſteria Libidinoſa*.

In the perſons liable to the fits of this diſeaſe, it is readily excited by the paſſions of the mind, and by every conſiderable emotion, eſpecially thoſe brought on by ſurpriſe.

The perſons liable to this diſeaſe acquire

quire often ſuch a degree of ſenſibility, as to be ſtrongly affected by every impreſſion that comes upon them by ſurpriſe.

MDXVIII.

In this hiſtory, there appears to be a concurrence of ſymptoms and circumſtances properly marking a very particular diſeaſe, which I think may be diſtinguiſhed from all others. It ſeems to me to have been improperly conſidered by phyſicians as the ſame with ſome other diſeaſes, and particularly with hypochondriaſis. The two diſeaſes may have ſome ſymptoms in common, but for the moſt part are conſiderably different.

Spaſmodic affections occur in both diſeaſes; but neither ſo frequently, nor to ſo great a degree, in hypochondriaſis as in hyſteria.

Perſons liable to hyſteria are ſometimes affected

affected at the ſame time with dyſpepſia. They are often, however, entirely free from it; but I believe this never happens to perſons affected with hypochondriaſis.

These different circumſtances mark ſome difference in the two diſeaſes; but they are ſtill more certainly diſtinguiſhed by the temperament they attack, and by the time of life at which they appear to be moſt exquiſitely formed.

It has been generally ſuppoſed, that the two diſeaſes differ only in reſpect of their appearing in different ſexes. But this is not well founded: for although the hyſteria appears moſt commonly in females, the male ſex is not abſolutely free from it, as I have obſerved above; and although the hypochondriaſis may be moſt frequent in men, the inſtances of it in the female ſex are very common.

MDXIX.

MDXIX.

From all these considerations, it must, I think, appear, that the hysteria may be very well, and properly, distinguished from hypochondriasis.

Further, it seems to me to have been with great impropriety, that almost every degree of the irregular motions of the nervous system has been referred to the one or other of these two diseases. Both are marked by a peculiarity of temperament, as well as by certain symptoms commonly accompanying that; but some of these, and many others usually marked by the name of nervous symptoms, may, from various causes, arise in temperaments different from that which is peculiar to either hysteria or hypochondriasis, and without being joined with the peculiar symptoms of either the one or the other disease: so that the appellations of

Hysteric

Hyſteric and Hypochondriac are very inaccurately applied to them. Under what view theſe ſymptoms are otherwiſe to be conſidered, I am not ready to determine; but muſt remark, that the appellation of Nervous Diſeaſes is too vague and undefined to be of any uſeful application.

MDXX.

Having thus endeavoured to diſtinguiſh hyſteria from every other diſeaſe, I ſhall now attempt its peculiar pathology. With reſpect to this, I think it will, in the firſt place, be obvious, that its paroxyſms begin by a convulſive and ſpaſmodic affection of the alimentary canal, which is afterwards communicated to the brain, and to a great part of the nervous ſyſtem. Although the diſeaſe appears to begin in the alimentary canal, yet the connection which the paroxyſms ſo often have with

the menſtrual flux, and with the diſeaſes that depend on the ſtate of the genitals, ſhows, that the phyſicians have at all times judged rightly in conſidering this diſeaſe as an affection of the uterus and other parts of the genital ſyſtem.

MDXXI.

With regard to this, however, I can go no farther. In what manner the uterus, and in particular the ovaria, are affected in this diſeaſe; how the affection of theſe is communicated, with particular circumſtances, to the alimentary canal; or how the affection of this, riſing upwards, affects the brain, ſo as to occaſion the particular convulſions which occur in this diſeaſe; I cannot pretend to explain.

But although I cannot trace this diſeaſe to its firſt cauſes, or explain the whole of the phenomena; I hope, that with reſpect

to the general nature of the diſeaſe, I may form ſome general concluſions, which may ſerve to direct our conduct in the cure of it.

MDXXII.

Thus from a conſideration of the predisponent and occaſional cauſes, it will, I think, appear, that the chief part of the proximate cauſe is a mobility of the ſyſtem, depending generally upon its plethoric ſtate.

MDXXIII.

Whether this diſeaſe ever ariſes from a mobility of the ſyſtem, independent of any plethoric ſtate of it, I cannot poſitively determine; but in many caſes that have ſubſiſted for ſome time, it is evident that a ſenſibility, and conſequently a mobility,

are acquired, which often appear when neither a general plethora can be ſuppoſed to ſubſiſt, nor an occaſional turgeſcence to have happened. However, as we have ſhown above, that a diſtention of the veſſels of the brain ſeems to occaſion epilepſy, and that a turgeſcence of the blood in the veſſels of the lungs ſeems to produce aſthma; ſo analogy leads me to ſuppoſe, that a turgeſcence of blood in the uterus, or in other parts of the genital ſyſtem, may occaſion the ſpaſmodic and convulſive motions which appear in hyſteria. It will, at the ſame time, be evident, that this affection of the genitals muſt eſpecially occur in plethoric habits; and every circumſtance mentioned in the hiſtory of the diſeaſe ſerves to confirm this opinion with reſpect to its proximate cauſe.

MDXXIV.

From this view of the ſubject, the analogy of hyſteria and epilepſy will readily appear; and why, therefore, I am to ſay that the indications of cure are the ſame in both.

As the indications, ſo the ſeveral means of anſwering them, are ſo much the ſame in both diſeaſes, that the ſame obſervations and directions, with regard to the choice and employment of theſe remedies, that have been delivered above on the ſubject of epilepſy, will apply pretty exactly to hyſteria; and therefore need not be repeated here.

CHAP.

CHAP. IX.

OF CANINE MADNESS AND HYDROPHOBIA.

MDXXV.

THIS disease has been so exactly and fully described in books that are in every body's hands, that it is on no account necessary for me to give any history of it here; and with respect to the pathology of it, I find that I can say nothing satisfying to myself, or that I can expect to prove so to others. I find also, with re-

ſpect to the cure of this diſeaſe, that there is no ſubject in which the fallacy of experience appears more ſtrongly than in this. From the moſt ancient to the preſent times, many remedies for preventing and curing this diſeaſe have been recommended under the ſanction of pretended experience, and have perhaps alſo kept their credit for ſome time: but ſucceeding times have generally, upon the ſame ground of experience, deſtroyed that credit entirely; and moſt of the remedies formerly employed are now fallen into abſolute neglect. In the preſent age, ſome new remedies have been propoſed, and have experience alleged to vouch for their efficacy; but many doubts ſtill remain with reſpect to this: and though I cannot determine in this matter from my own experience, I think it incumbent on me to give the beſt judgment I can form

form with reſpect to the choice of the remedies at preſent recommended.

MDXXVI.

I am, in the firſt place, firmly perſuaded, that the moſt certain means of preventing the conſequences of the bite, is to cut out, or otherwiſe deſtroy, the part in which the bite has been made. In this every body agrees; but with this difference, that ſome are of opinion that it can only be effectual when it is done very ſoon after the wound has been made, and they therefore neglect it when this opportunity is miſſed. There have been, however, no experiments made proper to determine this matter: and there are many conſiderations which lead me to think, that the poiſon is not immediately communicated to the ſyſtem; and therefore, that this meaſure of deſtroying the part may be

practiſed with advantage, even many days after the bite has been given.

MDXXVII.

Whilſt the ſtate of our experience, with reſpect to ſeveral remedies now in uſe, is uncertain, I cannot venture to aſſert that any of theſe is abſolutely ineffectual; but I can give it as my opinion, that the efficacy of mercury, given very largely, and perſiſted in for a long time, both as a means of preventing the diſeaſe, and of curing it when it has actually come on, is better ſupported by experience than that of any other remedy now propoſed, or commonly employed.

BOOK

BOOK IV.

OF

VESANIÆ,

OR OF THE

DISORDERS OF THE INTELLECTUAL FUNCTIONS.

CHAP. I.

OF VESANIÆ IN GENERAL.

MDXXVIII.

THE Noſologiſts, Sauvages and Sagar, in a claſs of diſeaſes under the title of VESANIÆ, have comprehended the two

 orders,

orders, of *Hallucinationes* or Falſe Perceptions, and of *Moroſitates* or Erroneous Appetites and Paſſions; and in like manner, Linnæus in his claſs of MENTALES, correſponding to the Veſaniæ of Sauvages, has comprehended the two orders of *Imaginarii* and *Pathetici*, nearly the ſame with the *Hallucinationes* and *Moroſitates* of that author. This, however, from ſeveral conſiderations, appears to me improper; and I have therefore formed a claſs of Veſaniæ nearly the ſame with the Paranoiæ of Vogel, excluding from it the Hallucinationes and Moroſitates, which I have referred to the Morbi Locales. Mr Vogel has done the like, in ſeparating from the Paranoiæ the falſe perceptions and erroneous appetites; and has thrown theſe into another claſs, to which he has given the title of Hyperæſtheſes.

MDXXIX.

It is indeed true, that certain hallucinationes and morositates are frequently combined with what I propose to consider as strictly a vesania or an erroneous judgement; and sometimes the hallucinationes seem to lay the foundation of, and to form almost entirely, the vesania. But as most part of the hallucinationes enumerated by the Nosologists are affections purely topical, and induce no other error of judgment beside that which relates to the single object of the sense or particular organ affected; so these are certainly to be separated from the diseases which consist in a more general affection of the judgment. Even when the hallucinationes constantly accompany or seem to induce the vesania, yet being such as arise from internal causes, and may be presumed to arise from the same cause as the more general affection,

tion of the judgment, they are therefore to be confidered as fymptoms of this only.

In like manner I judge with refpect to the morofitates, or erroneous paffions, that accompany vefania; which, as confequences of a falfe judgment, muft be confidered as arifing from the fame caufes, and as fymptoms only, of the more general affection.

There is, indeed, one cafe of a morofitas which feems to induce a vefania, or more general affection of the judgment; and this may lead us to confider the vefania, in this cafe, as a fymptom of an erroneous appetite, but will not afford any good reafon for comprehending the morofitates in general under the vefaniæ, confidered as primary difeafes.

The limitation, therefore, of the clafs of Vefaniæ to the lefions of our judging faculty, feems from every confideration to be proper.

The particular difeafes to be comprehended

hended under this claſs, may be diſtinguiſhed according as they affect perſons in the time of waking or of ſleeping. Thoſe which affect men awake, may again be conſidered, as they conſiſt in an erroneous judgment, to which I ſhall give the appellation of *Delirium*; or as they conſiſt in a weakneſs or imperfection of judgment, which I ſhall name *Fatuity*. I begin with the conſideration of Delirium.

MDXXX.

As men differ greatly in the ſoundneſs and force of their judgment, ſo it may be proper here to aſcertain more preciſely what error or imperfection of our judging faculty is to be conſidered as morbid, and to admit of the appellations of Delirium and Fatuity. In doing this, I ſhall firſt conſider the morbid errors of judgment under the general appellation of Delirium, which

which has been commonly employed to denote every mode of ſuch error.

MDXXXI.

As our judgment is chiefly exerciſed in diſcerning and judging of the ſeveral relations of things, I apprehend that delirium may be defined to be,—In a perſon awake, a falſe or miſtaken judgment of thoſe relations of things, which, as occurring moſt frequently in life, are thoſe about which the generality of men form the ſame judgment; and particularly when the judgment is very different from what the perſon himſelf had before uſually formed.

MDXXXII.

With this miſtaken judgment of relations there is frequently joined ſome falſe percep-

perception of external objects, without any evident fault in the organs of sense, and which seems therefore to depend upon an internal cause; that is, upon the imagination arising from a condition in the brain presenting objects which are not actually present. Such false perceptions must necessarily occasion a delirium, or an erroneous judgment, which is to be considered as the disease.

MDXXXIII.

Another circumstance, commonly attending delirium, is a very unusual association of ideas. As, with respect to most of the affairs of common life, the ideas laid up in the memory are, in most men, associated in the same manner; so a very unusual association, in any individual, must prevent his forming the ordinary judgment of those relations which are the

the moſt common foundation of aſſociation in the memory: and therefore this unuſual and commonly hurried aſſociation of ideas, uſually is, and may be conſidered as, a part of delirium. In particular it may be conſidered as a certain mark of a general morbid affection of the intellectual organs, it being an interruption or perverſion of the ordinary operations of memory, the common and neceſſary foundation of the exercise of judgement.

MDXXXIV.

A third circumſtance attending delirium, is an emotion or paſſion, ſometimes of the angry, ſometimes of the timid kind; and from whatever cauſe in the perception or judgment, it is not proportioned to ſuch cauſe, either in the manner formerly cuſtomary to the perſon himſelf, or in the

manner uſual with the generality of other men.

MDXXXV.

Delirium, then, may be more ſhortly defined,—In a perſon awake, a falſe judgement ariſing from perceptions of imagination, or from falſe recollection, and commonly producing diſproportionate emotions.

Such delirium is of two kinds; as it is combined with pyrexia and comatoſe affections; or, as it is entirely without any ſuch combination. It is the latter caſe that we name *Inſanity*; and it is this kind of delirium only that I am to treat of here.

MDXXXVI.

Inſanity may perhaps be properly conſidered.

ſidered as a genus comprehending many different ſpecies, each of which may deſerve our attention; but before proceeding to the conſideration of particular ſpecies, I think it proper to attempt an inveſtigation of the cauſe of inſanity in general.

MDXXXVII.

In doing this, I ſhall take it for granted, as demonſtrated elſewhere, that although this diſeaſe ſeems to be chiefly, and ſometimes ſolely, an affection of the mind; yet the connection between the mind and body in this life is ſuch, that theſe affections of the mind muſt be conſidered as depending upon a certain ſtate of our corporeal part. See Halleri Prim. Lin. Phyſiolog. § DLXX. See Boerhaavii Inſt. Med. § DLXXXI. DCXCVI.

MDXXXVIII.

Admitting this propoſition, I muſt in the next place aſſume another, which I likewiſe ſuppoſe to be demonſtrated elſewhere. This is, that the part of our body more immediately connected with the mind, and therefore more eſpecially concerned in every affection of the intellectual functions, is the common origin of the nerves; which I ſhall, in what follows, ſpeak of under the appellation of the Brain.

MDXXXIX.

Here, however, in aſſuming this laſt propoſition, a very great difficulty immediately preſents itſelf. Although we cannot doubt that the operations of our intellect always depend upon certain motions taking place in the brain, (ſee Gaub. Path. Med. § 523.); yet theſe mo-

tions have never been the objects of our senses, nor have we been able to perceive that any particular part of the brain has more concern in the operations of our intellect than any other. Neither have we attained any knowledge of what share the several parts of the brain have in that operation; and therefore, in this situation of our science, it must be a very difficult matter to discover those states of the brain that may give occasion to the various state of our intellectual functions.

MDXL.

It may be observed, that the different state of the motion of the blood in the vessels of the brain has some share in affecting the operations of the intellect; and physicians, in seeking for the causes of the different states of our intellectual functions, have hardly looked further than into the

state

ſtate of the motion of the blood, or into the condition of the blood itſelf: but it is evident that the operations of the intellectual functions ordinarily go on, and are often conſiderably varied, without our being able to perceive any difference either in the motions or in the condition of the blood.

MDXLI.

Upon the other hand, it is very probable that the ſtate of the intellectual functions depends chiefly upon the ſtate and condition of what is termed the Nervous Power, or, as we ſuppoſe, of a ſubtile very moveable fluid, included or inherent, in a manner we do not clearly underſtand, in every part of the medullary ſubſtance of the brain and nerves, and which in a living and healthy man is capable of being moved from every one part to every other of the nervous ſyſtem.

MDXLII.

With respect to this power, we have pretty clear proof that it frequently has a motion from the sentient extremities of the nerves towards the brain, and thereby produces sensation; and we have the same proof, that in consequence of volition the nervous power has a motion from the brain into the muscles or organs of motion. Accordingly, as sensation excites our intellectual operations, and volition is the effect of these, and as the connection between sensation and volition is always by the intervention of the brain and of intellectual operations; so we can hardly doubt, that these latter depend upon certain motions, and the various modification of these motions, in the brain.

MDXLIII.

MXLIII.

To aſcertain the different ſtates of theſe motions may be very difficult; and phyſicians have commonly conſidered it to be ſo very myſterious, that they have generally deſpaired of attaining any knowledge with regard to it: but I conſider ſuch abſolute deſpair, and the negligence it inſpires, to be always very blameable; and I ſhall now venture to go ſome length in the inquiry, hoping that ſome ſteps made with tolerable firmneſs may enable us to go ſtill further.

MDXLIV.

To this purpoſe, I think it evident, that the nervous power, in the whole as well as in the ſeveral parts of the nervous ſyſtem, and particularly in the brain, is at different times in different degrees of

 mobi-

mobility and force. To theſe different ſtates, I beg leave to apply the terms of *Excitement* and *Collapſe*. To that ſtate in which the mobility and force are ſufficient for the exerciſe of the functions, or when theſe ſtates are any way preternaturally increaſed, I give the name of *Excitement;* and to that ſtate in which the mobility and force are not ſufficient for the ordinary exerciſe of the functions, or when they are diminiſhed from the ſtate in which they had been before, I give the name of *Collapſe*. I beg, however, it may be obſerved, that by theſe terms I mean to expreſs matters of fact only; and without intending, by theſe terms, to explain the circumſtance or condition, mechanical or phyſical, of the nervous power or fluid in theſe different ſtates.

MDXLV.

MDXLV.

That theſe different ſtates of excitement and collapſe take place on different occaſions, muſt, I think, be manifeſt from numberleſs phenomena of the animal œconomy; but it is eſpecially to our preſent purpoſe to obſerve, that the different ſtates of excitement and collapſe, are in no inſtance more remarkable, than in the different ſtates of waking and ſleeping. In the latter, when quite complete, the motion and mobility of the nervous power, with reſpect to the whole of what are called the Animal Functions, entirely ceaſe, or, as I would expreſs it, are in a ſtate of collapſe; and are very different from the ſtate of waking, which in healthy perſons I would call a ſtate of general and entire excitement.

MDXLVI.

This difference in the ſtates of the nervous power in ſleeping and waking being admitted, I muſt in the next place obſerve, that when theſe ſtates are changed from the one into the other, as commonly happens every day, the change is hardly ever made inſtantaneouſly, but almoſt always by degrees, and in ſome length of time only: and this may be obſerved with reſpect to both ſenſe and motion. Thus when a perſon is falling aſleep, the ſenſibility is gradually diminiſhed: ſo that, although ſome degree of ſleep has come on, ſlight impreſſions will excite ſenſation, and bring back excitement; which the ſame, or even ſtronger impreſſions, will be inſufficient to produce when the ſtate of ſleep has continued longer, and is, as we may ſay, more complete. In like manner, the power of voluntary motion is gradually dimi-

diminiſhed. In ſome members it fails ſooner than in others; and it is ſome time before it becomes general and conſiderable over the whole.

The ſame gradual progreſs may be remarked in a perſon's coming out of ſleep: The ears in this caſe are often awake before the eyes are opened or ſee clearly, and the ſenſes are often awake before the power of voluntary motion is recovered; and it is curious to obſerve, that, in ſome caſes, ſenſations may be excited without producing the ordinary aſſociation of ideas. See Mem. de Berlin, 1752.

MDXLVII.

From all this, I think it will clearly appear, that not only the different ſtates of excitement and collapſe can take place in different degrees, but that they can take place in different parts of the brain,

 or

or at leaſt, with reſpect to the different functions, in different degrees.

As I preſume that almoſt every perſon has perceived the gradual approach of ſleeping and waking, I likewiſe ſuppoſe every perſon has obſerved, that, in ſuch intermediate ſtate of unequal excitement, there almoſt always occurs more or leſs of delirium, or dreaming, if any body chooſes to call it ſo. There are in this ſtate falſe perceptions, falſe aſſociations, falſe judgements, and diſproportionate emotions; in ſhort, all the circumſtances by which I have above defined delirium.

This clearly ſhows that delirium may depend, and I ſhall hereafter endeavour to prove that it commonly does depend, upon ſome inequality in the excitement of the brain; and that both theſe aſſertions are founded on this, that, in order to the proper exerciſe of our intellectual functions, the excitement muſt be complete,

and

and equal in every part of the brain. For though we cannot ſay that the veſtiges of ideas are laid up in different parts of the brain, or that they are in ſome meaſure diffuſed over the whole, it will follow upon either ſuppoſition, that as our reaſoning our intellectual operations always require the orderly and exact recollection or memory of aſſociated ideas; ſo, if any part of the brain is not excited, or not excitable, that recollection cannot properly take place, while at the ſame time other parts of the brain, more excited and excitable, may give falſe perceptions, aſſociations, and judgments.

MDXLVIII.

It will ſerve to illuſtrate this, that the collapſe in ſleep is more or leſs complete; or that the ſleep, as we commonly ſpeak, is more or leſs profound: and therefore, that in many caſes, though ſleep takes place to a con-

confiderable degree, yet certain impreffions do ftill take effect, and excite motions, or, if you will, fenfations in the brain; but which fenfations, upon account of the collapfed ftate of fo great a part of the brain, are generally of the delirious kind, or dreams, confifting of falfe perceptions, affociations, and judgments, that would have been corrected if the brain had been entirely excited.

Every one, I believe, has obferved, that the moft imperfect fleeps are thofe chiefly attended with dreaming; that dreams, therefore, moft commonly occur towards morning, when the complete ftate of fleep is paffing away; and further, that dreams are moft commonly excited by ftrong and uneafy impreffions made upon the body.

I apprehend it may alfo be an illuftration of the fame thing, that, even in waking hours, we have an inftance of an unequal ftate of excitement in the brain producing delirium. Such, I think, occurs in the cafe

caſe of fever. In this, it is manifeſt, that the energy of the brain, or its excitement, is conſiderably diminiſhed with reſpect to the animal functions: and it is accordingly upon this ground that I have explained above, in XLV. the delirium which ſo commonly attends fever. To what I have there ſaid I ſhall here only add, that it may ſerve to confirm my doctrine, that the delirium in fever comes on at a certain period of the diſeaſe only, and that we can commonly diſcern its approach by a more than uſual degree of it appearing in the time of the patient's falling into or coming out of ſleep. It appears, therefore, that delirium, when it firſt comes on in fever, depends upon an inequality of excitement; and it can hardly be doubted, that the delirium which comes at length to prevail in the entirely weakened ſtate of fevers, depends upon the ſame cauſe prevailing in a more conſiderable degree.

MDXLIX.

MDXLIX.

From what has been now delivered, I hope it will be ſufficiently evident, that delirium may be, and frequently is, occaſioned by an inequality in the excitement of the brain.

How the different portions of the brain may at the ſame time be excited or collapſed in different degrees, or how the energy of the brain may be in different degrees of force, with reſpect to the ſeveral animal, vital, and natural functions, I cannot pretend to explain; but it is ſufficiently evident in fact, that the brain may be at one and the ſame time in different conditions with reſpect to theſe functions. Thus in inflammatory diſeaſes, when by a ſtimulus applied to the brain the force of the vital functions is preternaturally increaſed, that of the animal is either little changed, or conſiderably diminiſhed. On the con-

trary, in many cafes of mania, the force of the animal functions depending always on the brain, is prodigioufly increafed, while the ftate of the vital function in the heart is very little or not at all changed. I muft therefore fay again, that how difficult foever it may be to explain the mechanical or phyfical condition of the brain in fuch cafes, the facts are fufficient to fhow that there is fuch an inequality as may difturb our intellectual operations.

MDL.

I have thus endeavoured to explain the general caufe of Delirium: which is of two kinds; according as it is with, or without, pyrexia. Of the firft I take no further notice here, having explained it as well as I could above in XLV.

I proceed now to confider that delirium which properly belongs to the clafs of Vefaniæ,

ſaniæ, and which I ſhall treat of under the general title of *Inſanity*.

MDLI.

In entering upon this ſubject, it immediately occurs, that in many inſtances of inſanity, we find, upon diſſection after death, that peculiar circumſtances had taken place in the general condition of the brain. In many caſes, it has been found of a drier, harder, and firmer conſiſtence, than what it is uſually of in perſons who had not been affected with that diſeaſe. In other caſes, it has been found in a more humid, ſoft, and flaccid ſtate; and in the obſervations of the late Mr Meckel*, it has been found conſiderably changed in its

* Memoir. de Berlin pour l'année 1764. It appeared in many inſtances of inſane perſons, that the medullary ſubſtance of the cerebrum was drier, and of a leſs ſpecific gravity, than in perſons who had been always of a ſound judgment.

its denſity or ſpecific gravity. Whether theſe different ſtates have been obſerved to be uniformly the ſame over the whole of the brain, I cannot certainly learn; and I ſuſpect the diſſectors have not always accurately inquired into this circumſtance: but in ſeveral inſtances, it appears that theſe ſtates had been different in different parts of the brain; and inſtances of this inequality will afford a confirmation of our general doctrine.

The accurate Morgagni has obſerved, that in maniacal perſons the medullary portion of the brain is unuſually dry, hard, and firm: And this he had ſo frequently obſerved, that he was diſpoſed to conſider it as generally the caſe. But in moſt of the particular inſtances which he has given, it appears, that, for the moſt part, while the cerebrum was of an unuſually hard and firm conſiſtence, the cerebellum was of its uſual ſoftneſs, and

in many of the cafes it was unufually foft and flaccid. In fome other cafes, Morgagni obferves, that while a part of the cerebrum was harder and firmer than ordinary, other parts of it were preternaturally foft.

MDLII.

Thefe obfervations tend to confirm our general doctrine: and there are others which I think will apply to the fame purpofe.

Upon the diffection of the bodies of perfons who had laboured under infanity, various organic affections have been difcovered in particular parts of the brain; and it is fufficiently probable, that fuch organic affections might have produced a different degree of excitement in the free and affected parts, and muft have interrupted in fome meafure the free communication between the feveral parts of the brain,

and

and in either way have occasioned insanity.

There have occurred so many instances of this kind, that I believe physicians are generally disposed to suspect organic lesions of the brain to exist in almost every case of insanity.

MDLIII.

This, however, is probably a mistake: for we know that there have been many instances of insanity from which the persons have entirely recovered; and it is difficult to suppose that any organic lesions of the brain had in such case taken place. Such transitory cases, indeed, render it probable, that a state of excitement, changeable by various causes, had been the cause of such instances of insanity.

MDLIV.

It is indeed further aſſerted, that in many inſtançes of inſane perſons, their brain had been examined after death, without ſhowing that any organic leſions had before ſubſiſted in the brain, or finding that any morbid ſtate of the brain then appeared. This, no doubt, may ſerve to ſhow, that organic leſions had not been the cauſe of the diſeaſe; but it does not aſſure us that no morbid change had taken place in the brain: for it is probable, that the diſſectors were not always aware of its being the general condition of hardneſs and denſity, as different in different parts of the brain, that was to be attended to, in order to diſcover the cauſe of the preceding diſeaſe; and therefore many of them had not with this view examined the ſtate of the brain, as Morgagni ſeems carefully to have done.

MDLV.

MDLV.

Having thus endeavoured to investigate the cause of insanity in general, it were to be wished that I could apply the doctrine to the distinguishing the several species of it, according as they depend upon the different state and circumstances of the brain, and thereby to the establishing of a scientific and accurately adapted method of cure. These purposes, however, appear to me to be extremely difficult to be attained; and I cannot hope to execute them here. All I can do is to make some attempts, and offer some reflections, which further observation, and greater sagacity, may hereafter render more useful.

MDLVI.

The ingenious Dr Arnold has been commen-

mendably employed in diſtinguiſhing the different ſpecies of inſanity as they appear with reſpect to the mind; and his labours may hereafter prove uſeful, when we ſhall come to know ſomething more of the different ſtates of the brain correſponding to theſe different ſtates of the mind; but at preſent I can make little application of his numerous diſtinctions. It appears to me that he has chiefly pointed out and enumerated diſtinctions, that are merely varieties, which can lead to little or no variety of practice: and I am eſpecially led to form the latter concluſion, becauſe theſe varieties appear to me to be often combined together, and to be often changed into one another, in the ſame perſon; in whom we muſt therefore ſuppoſe a general cauſe of the diſeaſe, which, ſo far as it can be known, muſt eſtabliſh the pathology, and eſpecially direct the practice.

MDLVII.

MDLVII.

In my limited views of the different ſtates of inſanity, I muſt go on to conſider them under the two heads of Mania and Melancholia: and though I am ſenſible that theſe two genera do not comprehend the whole of the ſpecies of inſanity, I am not clear in aſſigning the other ſpecies which may not be comprehended under thoſe titles. I ſhall, however, endeavour, on proper occaſions as I go along, to point them out as well as I can.

CHAP. II.

Of Mania, or Madness.

MDLVIII.

THE circumſtances which I have mentioned above in MDXXXV. as conſtituting delirium in general, do more eſpecially belong to that kind of it which I ſhall treat of here under the title of Mania.

There is ſometimes a falſe perception or imagination of things preſent that are not; but this is not a conſtant, nor even a frequent, attendant of the diſeaſe. The falſe judgment, is of relations long before laid up in the memory. It very often turns upon one

one ſingle jubject: but more commonly the mind rambles from one ſubject to another, with an equally falſe judgment concerning the moſt part of them; and as at the ſame time there is commonly a falſe aſſociation, this increaſes the confuſion of ideas, and therefore the falſe judgments. What for the moſt part more eſpecially diſtinguiſhes the diſeaſe, is a hurry of mind, in purſuing any thing like a train of thought, and in running from one train of thought to another. Maniacal perſons are in general very iraſcible; but what more particularly produces their angry emotions is, that their falſe judgments lead to ſome action which is always puſhed with impetuoſity and violence; when this is interrupted or reſtrained, they break out into violent anger and furious violence againſt every perſon near them, and upon every thing that ſtands in the way of their impetuous will. The falſe judgment

ment often turns upon a miſtaken opinion of ſome injury ſuppoſed to have been formerly received, or now ſuppoſed to be intended: and it is remarkable, that ſuch an opinion is often with reſpect to their former deareſt friends and relations; and therefore their reſentment and anger are particularly directed towards theſe. And although this ſhould not be the caſe, they commonly ſoon loſe that reſpect and regard which they formerly had for their friends and relations. With all theſe circumſtances, it will be readily perceived, that the diſeaſe muſt be attended very conſtantly with that incoherent and abſurd ſpeech we call raving. Further, with the circumſtances mentioned, there is commonly joined an unuſual force in all the voluntary motions; and an inſenſibility or reſiſtance of the force of all impreſſions, and particularly a reſiſtance of the powers of ſleep, of cold, and even of hunger;

ger; though indeed in many inſtances a voracious appetite takes place.

MDLIX.

It appears to me, that the whole of theſe circumſtances and ſymptoms point out a conſiderable and unuſual exceſs in the excitement of the brain, eſpecially with reſpect to the animal functions; and it appears at the ſame time to be manifeſtly in ſome meaſure unequal, as it very often takes place with reſpect to theſe functions alone, while at the ſame time the vital and natural are commonly very little changed from their ordinary healthy ſtate.

MDLX.

How this exceſs of excitement is produced, it may be difficult to explain. In the various inſtances of what Sauvages has named

named the Mania *Metastatica*, and in all the instances I have mentioned in my Nosology under the title of the Mania *Corporea*, it may be supposed that a morbid organic affection is produced in some part of the brain; and how that may produce an increased or unequal excitement in certain parts of it, I have endeavoured to explain above in MDLII. But I must at the same time acknowledge, that such remote causes of mania have very rarely occurred; and that therefore some other causes of the disease must be sought for.

The effects of violent emotions or passions of the mind have more frequently occurred as the remote causes of mania; and it is sufficiently probable, that such violent emotions, as they do often immediately produce a temporary increase of excitement, so they may, upon some occasions of their permanent inherence or frequent repetition, produce a more considerable

derable and more permanent excitement, that is, a mania.

With reſpect to thoſe cauſes of mania which ariſe in conſequence of a melancholia which had previouſly long ſubſiſted; whether we conſider that melancholia as a partial inſanity, or as a long perſiſting attachment to one train of thinking, it will be readily perceived, that in either caſe ſuch an increaſe of excitement may take place in ſo conſiderable a degree, and in ſo large a portion of the brain, as may give occaſion to a complete mania.

MLLXI.

Theſe conſiderations with regard to the remote cauſes appear to me to confirm ſufficiently our general doctrine of increaſed and unequal excitement in the mania which I have deſcribed above; but I muſt own, that I have not exhauſted the

the ſubject, and that there are caſes of mania of which I cannot aſſign the remote cauſes: but although I cannot in all caſes explain in what manner the mania is produced, I preſume, from the explanation given, and eſpecially from the ſymptoms enumerated above, to conclude, that the diſeaſe deſcribed above depends upon an increaſed excitement of the brain; an opinion in which I am the more confirmed, as I think it will point out the proper method of cure. At leaſt I think it will moſt clearly explain the operation of thoſe remedies, which, ſo far as I can learn from my own experience and that of others, have proved the moſt ſucceſsful in this diſeaſe; and, to illuſtrate this, I now enter upon the conſideration of theſe remedies, and to make ſome remarks upon the proper manner of employing them.

MDLXII.

Reſtraining the anger and violence of madmen is always neceſſary for preventing their hurting themſelves or others: but this reſtraint is alſo to be conſidered as a remedy. Angry paſſions are always rendered more violent by the indulgence of the impetuous motions they produce; and even in madmen the feeling of reſtraint will ſometimes prevent the efforts which their paſſion would otherwiſe occaſion. Reſtraint, therefore, is uſeful, and ought to be complete; but it ſhould be executed in the eaſieſt manner poſſible for the patient, and the ſtrait waiſtcoat anſwers every purpoſe better than any other that has yet been thought of. The reſtraining madmen by the force of other men, as occaſioning a conſtant ſtruggle and violent agitation, is often hurtful. Although, on many occaſions, it may not be ſafe to al-

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low maniacs to be upon their legs or to walk about, it is never desirable to confine them to a horizontal situation; and whenever it can be admitted, they should be more or less in an erect posture. Although there may be no symptoms of any preternatural fulness or increased impetus of blood in the vessels of the brain, a horizontal posture always increases the fulness and tension of these vessels, and may thereby increase the excitement of the brain.

MDLXIII.

The restraint mentioned requires confinement within doors, and it should be in a place which presents as few objects of sight and hearing as possible; and particularly, it should be removed from the objects that the patient was formerly acquainted with, as these would more readily call up ideas and their various associations. It is for this reason

that the confinement of madmen ſhould hardly ever be in their uſual habitation; or if they are, that their apartment ſhould be ſtripped of all its former furniture. It is alſo for the moſt part proper, that maniacs ſhould be without the company of any of their former acquaintance; the appearance of whom commonly excites emotions that increaſe the diſeaſe. Strangers may at firſt be offenſive; but in a little time they come to be objects either of indifference or of fear, and they ſhould not be frequently changed.

MDLXIV.

Fear being a paſſion that diminiſhes excitement, may therefore be oppoſed to the exceſs of it; and particularly to the angry and iraſcible excitement of maniacs. Theſe being more ſuſceptible of fear than might be expected, it appears to me to have been commonly uſeful. In moſt caſes it has

appeared to be neceſſary to employ a very conſtant impreſſion of fear; and therefore to inſpire them with the awe and dread of ſome particular perſons, eſpecially of thoſe who are to be conſtantly near them. This awe and dread is therefore, by one means or other, to be acquired; in the firſt place, by their being the authors of all the reſtraints that may be occaſionally proper; but ſometimes it may be neceſſary to acquire it even by ſtripes and blows. The former, although having the appearance of more ſeverity, are much ſafer than ſtrokes or blows about the head. Neither of them, however, ſhould be employed further than ſeems very neceſſary, and ſhould be truſted only to thoſe whoſe diſcretion can be depended upon. There is one caſe in which they are ſuperfluous; that is, when the maniacal rage is either not ſuſceptible of fear, or incapable of remembering the objects of it; for in ſuch inſtances, ſtripes and

and blows would be wanton barbarity. In many cafes of a moderate difeafe, it is of advantage that the perfons who are the authors of reftraint and punifhment fhould be upon other occafions the beftowers of every indulgence and gratification that is admiffible; never, however, neglecting to employ their awe when their indulgence fhall have led to any abufe.

MDLXV.

Although in mania, no particular irritation nor fulnefs of the fyftem feem to be prefent, it is plain, that the avoiding all irritation and means of fulnefs is proper; and therefore, that a diet neither ftimulating nor nourifhing is commonly to be employed. As it may even be ufeful to diminifh the fulnefs of the fyftem, fo both a low and a fpare diet is likely in moft cafes to be of fervice.

MDLXVI.

Upon the ſame principle, although no unuſual fulneſs of the body be preſent, it may be of advantage to diminiſh even its ordinary fulneſs by different evacuations.

Blood-letting, in particular, might be ſuppoſed uſeful; and in all recent caſes of mania it has been commonly practiſed, and I think with advantage; but when the diſeaſe has ſubſiſted for ſome time, I have ſeldom found blood-letting of ſervice. In thoſe inſtances in which there is any frequency or fulneſs of pulſe, or any marks of an increaſed impetus of the blood in the veſſels of the head, blood-letting is a proper and even a neceſſary remedy. Some practitioners, in ſuch caſes, have preferred a particular manner of blood-letting, recommending arteriotomy, ſcarifying the hind-head, or opening the jugular vein; and where any fulneſs or inflammatory diſ-

difpofition in the veffels of the brain, is to be fufpected, the opening of the veffels neareft to them is likely to be of the greateft fervice. The opening, however, of either the temporal artery or the jugular vein in maniacal perfons is very often inconvenient; and it may generally be fufficient to open a vein in the arm, while the body is kept in fomewhat of an erect pofture, and fuch a quantity of blood drawn as nearly brings on a deliquium animi, which is always a pretty certain mark of fome diminution of the fulnefs and tenfion of the veffels of the brain.

MDLXVII.

For the fame purpofe of taking off the fulnefs and tenfion of thefe veffels of the brain, purging may be employed; and I can in no other view underftand the celebrated ufe of hellebore among the an-

 cients.

cients. I cannot, however, ſuppoſe any ſpecific power in hellebore; and can by no means find that, at leaſt the black hellebore, is ſo efficacious with us as it is ſaid to have been at Anticyra. As coſtiveneſs, however, is commonly a very conſtant and hurtful attendant of mania, purgatives come to be ſometimes very neceſſary; and I have known ſome benefit obtained from the frequent uſe of pretty draſtic purgatives. In this, however, I have been frequently diſappointed; and I have found more advantage from the frequent uſe of cooling purgatives, particularly the ſoluble tartar, than from more draſtic medicines.

MDLXVIII.

Vomiting has alſo been frequently employed in mania; and by determining powerfully to the ſurface of the body, it may poſſibly diminiſh the fulneſs and tenſion

ſion of the veſſels, and thereby the excitement of the brain; but I have never carried the uſe of this remedy ſo far as might enable me to judge properly of its effects. Whether it may do harm by impelling the blood too forcibly into the veſſels of the brain, or whether by its general agitation of the whole ſyſtem it may remove that inequality of excitement which prevails in mania, I have not had experience enough to determine.

MDLXIX.

Frequent ſhaving of the head has been found of ſervice in mania, and by promoting perſpiration it probably takes off from the excitement of the internal parts. This, however, it is likely, may be more effectually done by bliſtering, which more certainly takes off the excitement of ſubjacent parts. In recent caſes it has been found uſeful by

inducing ſleep; and when it has that effect, the repetition of it may be proper: but in maniacal caſes that have laſted for ſome time, bliſtering has not appeared to me to be of any ſervice; and in ſuch caſes alſo I have not found perpetual bliſters, or any other form of iſſue, prove uſeful.

MDLXX.

As heat is the principal means of firſt exciting the nervous ſyſtem, and eſtabliſhing the nervous power and vital principle in animals; ſo, in caſes of preternatural excitement, the application of cold might be ſuppoſed a proper remedy: but there are many inſtances of maniacs who have been expoſed for a great length of time to a conſiderable degree of cold without having their ſymptoms anywiſe relieved. This may render in general the application of cold a doubtful remedy; but it is at the

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ſame time certain, that maniacs have often been relieved, and ſometimes entirely cured, by the uſe of cold bathing, eſpecially when adminiſtered in a certain manner. This ſeems to conſiſt, in throwing the madman into the cold water by ſurpriſe; by detaining him in it for ſome length of time; and, pouring water frequently upon the head, while the whole of the body except the head is immerſed in the water; and thus managing the whole proceſs, ſo as that, with the aſſiſtance of ſome fear, a refrigerant effect may be produced. This, I can affirm, has been often uſeful; and that the external application of cold may be of ſervice, we know further, from the benefit which has been received in ſome maniacal caſes from the application of ice and ſnow to the naked head, and from the application of the noted Clay Cap.

Warm bathing alſo has been recommended by ſome practical writers; and in ſome rigid

rigid melancholic habits it may poſſibly be uſeful, or as employed in the manner preſcribed by ſome, of immerſing the lower parts of the body in warm water, while cold water is poured upon the head and upper parts. Of this practice, however, I have had no experience; and in the common manner of employing warm bathing I have found it rather hurtful to maniacs.

MDLXXI.

According to my ſuppoſition that the diſeaſe depends upon an increaſed excitement of the brain, eſpecially with reſpect to the animal functions, opium, ſo commonly powerful in inducing ſleep, or a conſiderable collapſe as to theſe functions, ſhould be a powerful remedy of mania. That it has truly proved ſuch, I believe from the teſtimony of Bernard Huet, whoſe practice is narrated at the end of

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Wepferi Hiſtoria Apoplecticorum. I leave to my readers to ſtudy this in the work I have referred to, where every part of the practice is fully, and, as it appears to me, very judiciouſly delivered. I have never indeed carried the trial ſo far as ſeems to be requiſite to an entire cure: but I have frequently employed in ſome maniacal caſes, large doſes of opium; and when they had the effect of inducing ſleep, it was manifeſtly with advantage. At the ſame time, in ſome caſes, from doubts, whether the diſeaſe might not depend upon ſome organic leſions of the brain, when the opium would be ſuperfluous; and in other caſes, from doubts, whether there might not be ſome inflammatory affection joined with the mania, when the opium would be hurtful; I have never puſhed this remedy to the extent that might be neceſſary to make an entire cure.

MDLXXII.

MDLXXII.

Camphire has been recommended as a remedy of mania, and there are inſtances alleged of its having performed an entire cure. As it appears from the experiments of Beccaria that this ſubſtance is poſſeſſed of a ſedative and narcotic virtue, theſe cures are not altogether improbable: but in ſeveral trials, and even in large doſes, I have found no benefit from it; and excepting thoſe in the Philoſophical Tranſactions, N° 400. I have hardly met with any other teſtimonies in its favour.

MDLXXIII.

I have been informed that ſome maniacs have been cured by being compelled to conſtant and even hard labour; and as a forced attention to the conduct of any bodily exerciſe, is a very certain means of divert-

diverting the mind from purſuing any train of thought, it is highly probable that ſuch exerciſe may be uſeful in many caſes of mania.

I muſt conclude this ſubject with obſerving, that even in ſeveral caſes of complete mania, I have known a cure take place in the courſe of a journey carried on for ſome length of time.

MDLXXIV.

Theſe are the remedies which have been chiefly employed in the mania that has been above deſcribed, and I believe they have been employed promiſcuouſly without ſuppoſing that the mania was to be diſtinguiſhed into different ſpecies. Indeed I am not ready to ſay how far it is to be ſo diſtinguiſhed, but I ſhall offer one obſervation which may poſſibly merit attention.

It appears to me, that there are two different

ferent cafes of mania that are efpecially different according to the original temperament of the perfons whom the difeafe affects. It perhaps occurs moft frequently in perfons of a melancholic or atrabilarian temperament; but it certainly does alfo often occur in perfons of that very oppofite temperament which phyficians have named the Sanguine. According as the difeafe happens to occur in perfons of the one or other of thefe temperaments, I apprehend it may be confidered as of a different nature; and I believe, that accurate obfervation, employed upon a fufficient number of cafes, would difcern fome pretty conftant difference, either of the fymptoms, or at leaft of the ftate of fymptoms, in the two cafes. I imagine that falfe imaginations, particular averfions and refentments, are more fixed and fteady in the melancholic than in the fanguine; and that fomewhat inflammatory is more commonly

joined with mania in the ſanguine than in the melancholic. If ſuch difference, however, does truly take place, it will be obvious, that it may be proper to make ſome difference alſo in the practice. I am of opinion, that in the mania of ſanguine perſons, blood-letting and other antiphlogiſtic meaſures are more proper, and have been more uſeful, than in the melancholic. I likewiſe apprehend that cold bathing is more uſeful in the ſanguine than in the melancholic: but I have not had experience enough to aſcertain theſe points with ſufficient confidence.

I have only to add this other obſervation, that maniacs of the ſanguine temperament recover more frequently and more entirely than thoſe of the melancholic.

CHAP.

CHAP. III.

Of Melancholy, and other Forms of Insanity.

MDLXXV.

Melancholy has been commonly confidered as a partial infanity; and as fuch it is defined in my Nofology: but I now entertain doubts if this be altogether proper. By a partial infanity, I underftand a falfe and miftaken judgment upon one particular fubject, and what relates to it; whilft, on every other fubject, the perfon affected judges as the generality of other men do. Such cafes have

certainly occurred; but, I believe, few in which the partial insanity is strictly limited. In many cases of general insanity, there is one subject of anger or fear, upon which the false judgment more particularly turns, or which is at least more frequently than any other the prevailing object of delirium: and though, from the inconsistency which this principal object of delirium must produce, there is therefore also a great deal of insanity with regard to most other objects; yet this last is in very different degrees, both in different persons, and in the same person at different times. Thus persons considered as generally insane, will, however, at times, and in some cases, pretty constantly judge properly enough of present circumstances and incidental occurrences; though, when these objects engaging attention are not presented, the operations of imagination

may readily bring back a general confusion, or recall the particular object of the delirium. From theſe conſiderations, I am inclined to conclude, that the limits between general and partial inſanity cannot always be ſo exactly aſſigned, as to determine when the partial affection is to be conſidered as giving a peculiar ſpecies of diſeaſe, different from a more general inſanity.

MDLXXVI.

When inſanity, neither ſtrictly partial, nor entirely nor conſtantly general, occurs in perſons of a ſanguine temperament, and is attended with agreeable, rather than with angry or gloomy emotions, I think ſuch a diſeaſe muſt be conſidered as different from the Mania deſcribed above; and alſo, though partial, muſt be held as dif-

different from the proper Melancholia to be mentioned hereafter.

MDLXXVII.

Such a diſeaſe, as different from thoſe deſcribed MDLIV. requires, in my opinion, a different adminiſtration of remedies; and it will be proper for me to take particular notice of this here.

Although it may be neceſſary to reſtrain ſuch inſane perſons as we have mentioned MDLXXVI. from purſuing the objects of their falſe imagination or judgement, it will hardly be requiſite to employ the ſame force of reſtraint that is neceſſary in the impetuous and angry mania. It will be generally ſufficient to acquire ſome awe over them, that may be employed, and ſometimes even be neceſſary, to check the rambling of their imagination, and incoherency of judgment.

MDLXXVIII.

The reſtraint juſt now mentioned as neceſſary will generally require the patient's being confined to one place, for the ſake of excluding the objects, and more particularly the perſons, that might excite ideas connected with the chief objects of their delirium. At the ſame time, however, if it can be perceived there are objects or perſons that can call off their attention from the purſuit of their own diſordered imagination, and can fix it a little upon ſome others, theſe laſt may be frequently preſented to them: and for this reaſon, a journey, both by its having the effect of interrupting all train of thought, and by preſenting objects engaging attention, may often be uſeful. In ſuch caſes alſo, when the inſanity, though more eſpecially fixed upon one miſtaken ſubject, is not confined to this alone, but is further apt to ramble

ramble over other ſubjects with incoherent ideas, I apprehend the confining or forcing ſuch perſons to ſome conſtant uniform labour, may prove an uſeful remedy.

MDLXXIX.

When ſuch caſes as in MDLXVI. occur in ſanguine temperaments, and may therefore approach more nearly to Phrenitic Delirium; ſo, in proportion as the ſymptoms of this tendency are more evident and conſiderable, blood-letting and purging will be the more proper and neceſſary.

MDLXXX.

To this ſpecies of inſanity, when occurring in ſanguine temperaments, whether it be more or leſs partial, I apprehend that cold bathing is particularly adapted; while,

in the partial inſanity of melancholic perſons, as I ſhall ſhow hereafter, it is hardly admiſſible.

MDLXXXI.

Having thus treated of a ſpecies of inſanity, different, in my apprehenſion, from both the Mania and Melancholia, I proceed to conſider what ſeems more properly to belong to this laſt.

MDLXXXII.

The diſeaſe which I name Melancholia is very often a partial inſanity only. But as in many inſtances, though the falſe imagination or judgment ſeems to be with reſpect to one ſubject only; yet it ſeldom happens that this does not produce much inconſiſtency in the other intellectual operations: And as, between a very general and a very partial inſanity, there

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are all the poſſible intermediate degrees; ſo it will be often difficult, or perhaps improper, to diſtinguiſh Melancholia by the character of Partial Inſanity alone. If I miſtake not, it muſt be chiefly diſtinguiſhed by its occurring in perſons of a melancholic temperament, and by its being always attended with ſome ſeemingly groundleſs, but very anxious, fear.

MDLXXXIII.

To explain the cauſe of this, I muſt obſerve, that perſons of a melancholic temperament are for the moſt part of a ſerious thoughtful diſpoſition, and diſpoſed to fear and caution, rather than to hope and temerity. Perſons of this caſt are leſs moveable than others by any impreſſions; and are therefore capable of a cloſer or more continued attention to one particular object, or train of thinking. They are even

ready to be engaged in a conſtant application to one ſubject; and are remarkably tenacious of whatever emotions they happen to be affected with.

MDLXXXIV.

These circumſtances of the melancholic character, ſeem clearly to ſhow, that perſons ſtrongly affected with it may be readily ſeized with an anxious fear; and that this, when much indulged, as is natural to ſuch perſons, may eaſily grow into a partial inſanity.

MDLXXXV.

Fear and dejection of mind, or a timid and deſponding diſpoſition, may ariſe in certain ſtates, or upon certain occaſions, of mere debility: and it is upon this footing, that I ſuppoſe it ſometimes to attend dyſpepſia. But in theſe caſes, I believe the

the deſpondent diſpoſition hardly ever ariſes to a conſiderable degree, or proves ſo obſtinately fixed as when it occurs in perſons of a melancholic temperament. In theſe laſt, although the fear proceed from the ſame dyſpeptic feelings as in the other caſe, yet it will be obvious, that the emotion may riſe to a more conſiderable degree; that it may be more anxious, more fixed, and more attentive; and therefore may exhibit all the various circumſtances which I have mentioned in MCCXXII. to take place in the diſeaſe named HYPOCHONDRIASIS.

MDLXXXVI.

In conſidering this ſubject formerly in diſtinguiſhing Dyſpepſia from Hypochondriaſis, although the ſymptoms affecting the body be very much the ſame in both, and even thoſe affecting the mind be ſomewhat ſimilar, I found no difficulty in

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diſtinguiſhing the latter diſeaſe, merely from its occurring in perſons of a melancholic temperament, But I muſt now acknowledge, that I am at a loſs to determine how in all caſes hypochondriaſis and melancholia may be diſtinguiſhed from one another, whilſt the ſame temperament is common to both.

MDLXXXVII.

I apprehend, however, that the diſtinction may be generally aſcertained in the following manner.

The hypochondriaſis I would conſider as being always attended with dyſpeptic ſymptoms: and though there may be, at the ſame time, an anxious melancholic fear ariſing from the feeling of theſe ſymptoms; yet while this fear is only a miſtaken judgement with reſpect to the ſtate of the perſon's own health, and to the danger to be from

from thence apprehended, I would ſtill conſider the diſeaſe as a hypochondriaſis, and as diſtinct from the proper melancholia. But when an anxious fear and deſpondency ariſes from a miſtaken judgment with reſpect to other circumſtances than thoſe of health, and more eſpecially when the perſon is at the ſame time without any dyſpeptic ſymptoms, every one will readily allow this to be a diſeaſe widely different from both dyſpepſia and hypochondriaſis; and it is, what I would ſtrictly name Melancholia.

MDLXXXVIII.

In this there ſeems little difficulty: but as an exquiſitely melancholic temperament may induce a torpor and ſlowneſs in the action of the ſtomach, ſo it generally produces ſome dyſpeptic ſymptoms; and from thence there may be ſome difficulty in diſtinguiſh-

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ing ſuch a caſe from hypochondriaſis. But I would maintain, however, that when the characters of the temperament are ſtrongly marked; and more particularly when the falſe imagination turns upon other ſubjects than that of health, or when, though relative to the perſon's own body, it is of a groundleſs and abſurd kind; then, notwithſtanding the appearance of ſome dyſpeptic ſymptoms, the caſe is ſtill to be conſidered as that of a melancholia, rather than a hypochondriaſis.

MDLXXXIX.

The diſeaſe of melancholia, therefore, manifeſtly depends upon the general temperament of the body: and although, in many perſons, this temperament is not attended with any morbid affection either of mind or body; yet when it becomes exquiſitely formed, and is in a high degree,

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it may become a diſeaſe affecting both, and particularly the mind. It will therefore be proper to conſider in what this melancholic temperament eſpecially conſiſts; and to this purpoſe, it may be obſerved, that in it there is a degree of torpor in the motion of the nervous power, both with reſpect to ſenſation and volition; that there is a general rigidity of the ſimple ſolids; and that the balance of the ſanguiferous ſyſtem is upon the ſide of the veins. But all theſe circumſtances are the directly oppoſite of thoſe of the ſanguine temperament; and muſt therefore alſo produce an oppoſite ſtate of mind.

MDXC.

It is this ſtate of the mind, and the ſtate of the brain correſponding to it, that is the chief object of our preſent conſideration. But what that ſtate of the brain is,

is, will be ſuppoſed to be difficult to explain; and it may perhaps ſeem raſh in me to attempt it.

I will, however, venture to ſay, that it is probable the melancholic temperament of mind depends upon a drier and firmer texture in the medullary ſubſtance of the brain; and that this perhaps proceeds from a certain want of fluid in that ſubſtance, which appears from its being of a leſſer ſpecific gravity than uſual. That this ſtate of the brain in melancholia does actually exiſt, I conclude, *firſt*, from the general rigidity of the whole habit; and, *ſecondly*, from diſſections, ſhowing ſuch a ſtate of the brain to have taken place in mania, which is often no other than a higher degree of melancholia. It does not appear to me anywiſe difficult to ſuppoſe, that the ſame ſtate of the brain may in a moderate degree give melancholia; and in a higher, that mania which melancholia ſo often

paſſes

paſſes into; eſpecially if I ſhall be allowed further to ſuppoſe, that either a greater degree of firmneſs in the ſubſtance of the brain may render it ſuſceptible of a higher degree of excitement, or that one portion of the brain may be liable to acquire a greater firmneſs than others, and conſequently give occaſion to that inequality of excitement upon which mania ſo much depends.

MDXCI.

I have thus endeavoured to deliver what appears to me moſt probable with reſpect to the proximate cauſe of melancholia; and although the matter ſhould in ſome reſpects remain doubtful, I am well perſuaded that theſe obſervations may often be employed to direct our practice in this diſeaſe, as I ſhall now endeavour to ſhow.

MDXCII.

MDXCII.

In moſt of the inſtances of melancholia, the mind is to be managed very much in the ſame manner as I have adviſed above with regard to hypochondriaſis; but as in the caſe of proper melancholia, there is commonly a falſe imagination or judgement appearing as a partial inſanity, it may be further neceſſary in ſuch caſes to employ ſome artifices for correcting ſuch imagination or judgment.

MDXCIII.

The various remedies for relieving the dyſpeptic ſymptoms which always attend hypochondriaſis, will ſeldom be either requiſite or proper in melancholia.

There is only one of the dyſpeptic ſymptoms, which, though there ſhould be no other, is very conſtantly preſent in melancholia,

cholia, and that is coſtiveneſs. This it is always proper and even neceſſary to remove; and I believe it is upon this account that the uſe of purgatives has been found ſo often uſeful in melancholia. Whether there be any purgatives peculiarly proper in this caſe, I dare not poſitively determine; but with reſpect to the choice of purgatives in melancholia, I am of the ſame opinion that I delivered above on this ſame ſubject with reſpect to mania.

MDXCIV.

With reſpect to other remedies, I judge that blood-letting will more ſeldom be proper in melancholia than in mania; but how far it may be in any caſe proper, muſt be determined by the ſame conſiderations as in the caſe of mania.

MDXCV.

The cold bathing that I judged to be ſo very uſeful in ſeveral caſes of inſanity, is, I believe, in melancholia, hardly ever fit to be admitted; at leaſt while this is purely a partial affection, and without any marks of violent excitement. On the contrary, upon account of the general rigidity prevailing in melancholia, it is probable that warm bathing may be often uſeful.

MDXCVI.

With reſpect to opiates which I have ſuppoſed might often be uſeful in caſes of mania, I believe they can ſeldom be properly employed in the partial inſanities of the melancholic, except in certain inſtances of violent excitement, when the melancholia approaches nearly to the ſtate of mania.

MDXCVII.

MDXCVII.

In ſuch caſes of melancholia approaching to a ſtate of mania, a low diet may ſometimes be neceſſary; but as the employing a low diet almoſt unavoidably leads to the uſe of vegetable food, and as this in every torpid ſtate of the ſtomach is ready to produce ſome dyſpeptic ſymptoms, ſuch vegetable food ought, in moderate caſes of melancholia, to be uſed with ſome caution.

Though exerciſe, as a tonic power, is not proper either in hypochondriaſis or melancholia; yet, with reſpect to its effects upon the mind, it may be extremely uſeful in both, and in melancholia is to be employed in the ſame manner that I have adviſed above in the caſe of hypochondriaſis.

MDXCVIII.

Having now delivered my doctrine with respect to the chief forms of insanity, I should in the next place proceed to consider the other genera of Amentia and Oneirodynia, which in the Nosology I have arranged under the order of Vesaniæ: but as I cannot pretend to throw much light upon these subjects, and as they are seldom the objects of practice, I think it allowable for me to pass them over at present; and the particular circumstances of this work in some measure requires that I should do so.

PART

PART III.

OF

CACHEXIES.

MDXCIX.

UNDER this title I propoſe to eſtabliſh a claſs of diſeaſes, which conſiſt in a depraved ſtate of the whole, or of a conſiderable part, of the habit of the body, without any primary pyrexia or neuroſis combined with that ſtate.

MDC.

The term *Cachexy* has been employed by Linnæus and Vogel, as it had been formerly by other authors, for the name of a particular diſeaſe: but the diſeaſe to which theſe authors have affixed it, comes more properly under another appellation; and the term of *Cachexy* is more properly employed by Sauvages and Sagar for the name of a claſs. In this I have followed the laſt-mentioned noſologiſts, though I find it difficult to give ſuch a character of the claſs as will clearly apply to all the ſpecies I have comprehended under it. This difficulty would be ſtill greater, if, in the claſs I have eſtabliſhed under the title of *Cachexies*, I were to comprehend all the diſeaſes that thoſe other noſologiſts have done; but I am willing to be thought deficient rather than very incorrect. Thoſe difficulties, however,

ever, which ſtill remain in methodical noſology, muſt not affect us much in a treatiſe of practice. If I can here properly diſtinguiſh and deſcribe the ſeveral ſpecies that truly and moſt commonly exiſt, I ſhall be the leſs concerned about the accuracy of my general claſſification: though at the ſame time this, I think, is always to be attempted; and I ſhall purſue it as well as I can.

BOOK I.

OF

EMACIATIONS.

MDCI.

EMACIATION, or a conſiderable dimi-nution of the bulk or plumpneſs of the whole body, is for the moſt part only a ſymptom of diſeaſe, and very ſeldom to be conſidered as a primary and idiopathic affection. Upon this account, according to my general plan, ſuch a ſymptom might

might perhaps have been omitted in the Methodical Nosology: but both the uncertainty of concluding it to be always symptomatic, and the consistency of system, made me introduce into the Nosology, as others had done, an order under the title of *Marcores;* and this renders it requisite now to take some notice of such diseases.

MDCII.

Upon this occasion, therefore, I hope it may be useful to investigate the several causes of emaciation in all the different cases of disease in which it appears. And this I attempt, as the surest means of determining how far it is a primary, or a symptomatic affection only; and even in the latter view, the investigation may be attended with some advantage.

MDCIII.

MDCIII.

The caufes of emaciation may, I apprehend, be referred to two general heads; that is, either to a general deficiency of fluid in the veffels of the body, or to the particular deficiency of the oil in the cellular texture of it. Thefe caufes are frequently combined together; but it will be proper, in the firft place, to confider them feparately.

MDCIV.

As a great part of the body of animals is made up of veffels filled with fluids, the bulk of the whole muft depend very much on the fize of thefe veffels, and the quantity of fluids prefent in them: and it will therefore be fufficiently obvious, that a deficiency of the fluids in thefe veffels muft, according to its degree, occafion

ſion a proportionate diminution of the bulk of the whole body. This, however, will appear ſtill more clearly, from conſidering that in the living and ſound body the veſſels every where ſeem to be preternaturally diſtended by the quantity of fluids preſent in them; but being at the ſame time elaſtic, and conſtantly endeavouring to contract themſelves, they muſt, on the withdrawing of the diſtending force, or, in other words, upon a diminution of the quantity of fluids, be in proportion contracted and diminiſhed in their ſize: And it may be further obſerved, that as each part of the vaſcular ſyſtem communicates with every other part of it; ſo every degree of diminution of the quantity of fluid, in any one part, muſt in proportion diminiſh the bulk of the vaſcular ſyſtem, and conſequently of the whole body.

MDCV.

MDCV.

The diminution and deficiency of the fluids may be occaſioned by different cauſes: ſuch as, firſt, by a due quantity of aliments not being taken in; or by the aliment taken in, not being of a ſufficiently nutritious quantity. Of the want of a due quantity of aliment not being taken into the body, there is an inſtance in the *Atrophia lactantium* Sauvageſii, ſpecies 3. and many other examples have occurred of emaciation from want of food, occaſioned by poverty, and other accidental cauſes.

With reſpect to the quality of food, I apprehend it ariſes from the want of nutritious matter in the food employed, that perſons living very entirely on vegetables are ſeldom of a plump and ſucculent habit.

MDCVI.

MDCVI.

A ſecond cauſe of the deficiency of fluids may be, the aliments taken in not being conveyed to the blood-veſſels. This may occur from a perſon's being affected with a frequent vomiting; which, rejecting the food ſoon after it had been taken in, muſt prevent the neceſſary ſupply of fluids to the blood-veſſels.

Another cauſe, frequently interrupting the conveyance of the alimentary matter into the blood-veſſels, is an obſtruction of the conglobate or lymphatic glands of the meſentery, through which the chyle muſt neceſſarily paſs to the thoracic duct. Many inſtances of emaciation, ſeemingly depending upon this cauſe, have been obſerved by phyſicians, in perſons of all ages, but eſpecially in the young. It has alſo been remarked, that ſuch caſes have moſt frequently occurred in ſcrophulous perſons, in

in whom the mefenteric glands are commonly affected with tumour or obftruction, and in whom, generally at the fame time, fcrophula appears externally. Hence the *Tabes fcrophulofa Synop. Nofolog.* vol. ii. p. 266.: And under thefe I have put as fynonimes *Tabes glandularis*, fp. 10.; *Tabes mefenterica*, fp. 9.; *Scrophula mefenterica*, fp. 4.; *Atrophia infantilis*, fp. 13.; *Atrophia rachitica*, fp. 8.; *Tabes rachialgica*, fp. 16. At the fame time, I have frequently found the cafe occurring in perfons who did not fhow any external appearance of fcrophula, but in whom the mefenteric obftruction was afterwards difcovered by diffection. Such alfo I fuppofe to have been the cafe in the difeafe frequently mentioned by authors under the title of the *Atrophia infantum*. This has received its name from the time of life at which it generally appears; but I have met with inftances of it at fourteen years

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of age aſcertained by diſſection. In ſeveral ſuch cafes which I have ſeen, the patients were without any ſcrophulous appearances at the time, or at any period of their lives before.

In the caſe of phthiſical perſons, I ſhall hereafter mention another cauſe of their emaciation; but it is probable that an obſtruction of the meſenteric glands, which ſo frequently happens in ſuch perſons, concurs very powerfully in producing the emaciation that takes place.

Although a ſcrophulous taint may be the moſt frequent cauſe of meſenteric obſtructions, it is ſufficiently probable that other kinds of acrimony may produce the ſame, and the emaciation that follows.

It may perhaps be ſuppoſed, that the interruption of the chyle's paſſing into the blood-veſſels may be ſometimes owing to a fault of the abſorbents on the internal ſurface of the inteſtines. This, however, cannot

cannot be readily ascertained: but the interruption of the chyle's passing into the blood-vessels may certainly be owing to a rupture of the thoracic duct; which, when it does not prove soon fatal, by occasioning a hydrothorax, must in a short time produce a general emaciation.

MDCVII.

A third cause of the deficency of the fluids may be a fault in the organs of digestion, as not duly converting the aliment into a chyle fit to form in the blood-vessels a proper nutritious matter. It is not, however, easy to ascertain the cases of emaciation which are to be attributed to this cause; but I apprehend that the emaciation which attends long subsisting cases of dyspepsia, or of hypochondriasis, is to be explained chiefly in this way. It is this which I have placed in the Nosology under the

title of the *Atrophia debilium*; and of which the *Atrophia nervoſa*, Sauv. ſp. 1. is a proper inſtance, and therefore put there as a ſynonime. But the other titles of *Atrophia lateralis*, Sauv. ſp. 15. and *Atrophia ſenilis*, Sauv. ſp. 11. are not ſo properly put there, as they muſt be explained in a different manner.

MDCVIII.

A fourth cauſe of a deficiency of the fluids in the body, may be exceſſive evacuations made from it by different outlets; and Sauvages has properly enumerated the following ſpecies, which we have put as ſynonimes under the title of *Atrophia inanitorum*; as, *Tabes nutricum*, ſp. 4. *Atrophia nutricum*, ſp. 5. *Atrophia à leucorrhœa*, ſp. 4. *Atrophia ab alvi fluxu*, ſp. 6. *Atrophia à ptyaliſmo*, ſp. 7. and laſtly, the

Tabes à ſanguifluxu; which, it is to be obſerved, may ariſe not only from ſpontaneous hemorrhagies or accidental wounds, but alſo from blood-letting in too large a quantity, and too frequently repeated.

Upon this ſubject it ſeems proper to obſerve, that a meagre habit of body frequently depends upon a full perſpiration being conſtantly kept up, though at the ſame time a large quantity of nutritious aliment is regularly taken in.

MDCIX.

Beſides this deficiency of fluids from evacuations by which they are carried entirely out of the body, there may be a deficiency of fluid and emaciation in a conſiderable part of the body, by the fluids being drawn into one part, or collected into one cavity; and of this we have an in-

inſtance in the *Tabes à hydrope*, Sauv. ſp. 5.

MDCX.

In the Methodical Noſology, among the other ſynonimes of the *Atrophia inanitorum* I have ſet down the *Tabes dorſalis*; but whether properly or not, I at preſent very much doubt. In the evacuation conſidered as the cauſe of this tabes, as the quantity evacuated is never ſo great as to account for a general deficiency of fluids in the body, we muſt ſeek for another explanation of it. And whether the effects of the evacuation may be accounted for, either from the quality of the fluid evacuated, or from the ſingularly enervating pleaſure attending the evacuation, or from the evacuation's taking off the tenſion of parts, the tenſion of which has a ſingular power in ſupporting the tenſion and vigour of the

whole body, I cannot poſitively determine; but I apprehend that upon one or other of theſe ſuppoſitions the emaciation attending the tabes dorſalis muſt be accounted for; and therefore that it is to be conſidered as an inſtance of the *Atrophia debilium*, rather than of the *Atrophia inanitorum*.

MDCXI.

A fifth cauſe of a deficiency of fluids and of emaciations in the whole or in a particular part of the body, may be the concretion of the ſmall veſſels, either not admitting of fluids, or of the ſame proportion as before; and this ſeems to me to be the caſe in the *Atrophia ſenilis*, Sauv. ſp. 2. Or it may be a palſy of the larger trunks of the arteries rendering them unfit to propel the blood into the ſmaller veſſels; as is frequently the caſe of paralytic limbs, in which the arteries are af-

fected

fected as well as the muſcles. The *Atrophia lateralis.* Sauv. ſp. 15. ſeems to be of this nature.

MDCXII.

A ſecond general head of the cauſes of emaciation I have mentioned in MDCII. to be a deficiency of oil. The extent and quantity of the cellular texture in every part of the body, and therefore how conſiderable a part it makes in the bulk of the whole, is now well known. But this ſubſtance, in different circumſtances, is more or leſs filled with an oily matter; and therefore the bulk of it, and in a great meaſure that of the whole body, muſt be greater or leſs according as this ſubſtance is more or leſs filled in that manner. The deficiency of fluids, for a reaſon to be immediately explained, is generally accompanied with a deficiency of oil: but

phyſicians have commonly attended more to the latter cauſe of emaciation than to the other, that being uſually the moſt evident; and I ſhall now endeavour to aſſign the ſeveral cauſes of the deficiency of oil as it occurs upon different occaſions.

MDCXIII.

The buſineſs of ſecretion in the human body is in general little underſtood, and in no inſtance leſs ſo than in that of the ſecretion of oil from blood which does not appear previouſly to have contained it. It is poſſible, therefore, that our theory of the deficiency of oil may be in ſeveral reſpects imperfect; but there are certain facts that may in the mean time apply to the preſent purpoſe.

MDCXIV.

Firſt, it is probable, that a deficiency of oil

oil may be owing to a ſtate of the blood in animal bodies leſs fitted to afford a ſecretion of oil, and conſequently to ſupply the waſte of it that is conſtantly made. This ſtate of the blood muſt eſpecially depend upon the ſtate of the aliments taken in, as containing leſs of oil or oily matter. From many obſervations made, both with reſpect to the human body and to that of other animals, it appears pretty clearly, that the aliments taken in by men and domeſtic animals, according as they contain more of oil, are in general more nutritious, and in particular are better fitted to fill the cellular texture of their bodies with oil. I might illuſtrate this, by a minute and particular conſideration of the difference of alimentary matters employed; but it will be enough to give two inſtances. The one is, that the herbaceous part of vegetables, does not fatten animals, ſo much as the

feeds of vegetables, which manifeftly contain in any given weight a greater proportion of oil; and a fecond inftance is, that in general vegetable aliments do not fatten men fo much as animal food, which generally contains a larger proportion of oil.

It will be obvious, that upon the fame principles a want of food, or a lefs nutritious food, may not only occafion a general deficiency of fluids (MDCIV.), but muft alfo afford lefs oil, to be poured into the cellular texture. In fuch cafes, therefore, the emaciation produced, is to be attributed to both thefe general caufes.

MDCXV.

A fecond cafe of the deficiency of oil may be explained in this manner. It is pretty manifeft, that the oil of the blood is fecreted and depofited in the cellular texture

ture in greater or leſſer quantity, according as the circulation of the blood is faſter or ſlower; and therefore that exerciſe, which haſtens the circulation of the blood, is a frequent cauſe of emaciation. Exerciſe produces this effect in two ways. 1ſt, By increaſing the perſpiration, and thereby carrying off a greater quantity of the nutritious matter, it leaves leſs of it to be depoſited in the cellular texture; thereby not only preventing an accumulation of fluids, but, as I have ſaid above, cauſing a general deficiency of theſe, which muſt alſo cauſe a deficiency of oil in the cellular texture. 2dly, It is well known, that the oil depoſited in the cellular texture is upon many occaſions, and for various purpoſes of the œconomy, again abſorbed, and mixed or diffuſed in the maſs of blood, to be from thence perhaps carried entirely out of the body by the ſeveral excretions. Now, among other purpoſes

poſes of the accumulation and re-abſorption of oil, this ſeems to be one, that the oil is requiſite to the proper action of the moving fibres in every part of the body; and therefore that nature has provided for an abſorption of oil to be made according as the action of the moving fibres may demand it. It will thus be obvious, that the exerciſe of the muſcular and moving fibres every where, muſt occaſion an abſorption of oil; and conſequently that ſuch exerciſe not only prevents the ſecretion of oil, as has been already ſaid, but may alſo cauſe a deficiency of it, by occaſioning an abſorption of what had been depoſited; and in this way, perhaps eſpecially, does it produce emaciation.

MDCXVI.

A third caſe of the deficiency of oil may occur from the following cauſe. It is pro-

probable, that one purpose of the accumulation of oil in the cellular texture of animals is, that it may, upon occasion, be again absorbed from thence, and carried into the mass of blood, for the purpose of inveloping and correcting any unusual acrimony arising and existing in the state of the fluids. Thus, in most instances in which we can discern an acrid state of the fluids, as in scurvy, cancer, syphilis, poisons, and several other diseases, we find at the same time a deficiency of oil and an emaciation take place; which, in my apprehension, must be attributed to the absorption of oil, which the presence of acrimony in the body excites.

It is not unlikely that certain poisons introduced into the body, may subsist there; and, giving occasion to an absorption of oil, may lay a foundation for the *Tabes à veneno*, Sauv. sp. 17.

MDCXVII.

MDCXVII.

A fourth caſe of emaciation, and which I would attribute to a ſudden and conſiderable abſorption of oil from the cellular texture, is that of fever, which ſo generally produces emaciation. This may perhaps be in part attributed to the increaſed perſpiration, and therefore to the general deficiency of fluids that may be ſuppoſed to take place: but whatever ſhare that may have in producing the effect, we can, from the evident ſhrinking and diminution of the cellular ſubſtance, wherever it falls under our obſervation, certainly conclude, that there has been a very conſiderable abſorption of the oil which had been before depoſited in that ſubſtance. This explanation is rendered the more probable from this, that I ſuppoſe the abſorption mentioned is neceſſarily made for the purpoſe of inveloping or correcting an acrimony,

mony, which manifestly does in many, and may be suspected to arise in all, cases of fever. The most remarkable instance of emaciation occurring in fevers, is that which appears in the case of hectic fevers. Here the emaciation may be attributed to the profuse sweatings that commonly attend the disease: but there is much reason to believe, that an acrimony also is present in the blood; which, even in the beginning of the disease, prevents the secretion and accumulation of oil; and in the more advanced states of it, must occasion a more considerable absorption of it; which, from the shrinking of the cellular substance, seems to go farther than in almost any other instance.

Upon the subject of emaciations from a deficiency of fluids, it may be observed, that every increased evacuation excites an absorption from other parts, and particularly from the cellular texture; and

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it is therefore probable, that a deficiency of fluids, from increafed evacuations, produces an emaciation, not only by the wafte of the fluids in the vafcular fyftem, but alfo by occafioning a confiderable abforption from the cellular texture.

MDCXVIII.

I have thus endeavoured to explain the feveral cafes and caufes of emaciation; but I could not profecute the confideration of thefe here in the order they are fet down in the Methodical Nofology. In that work I was engaged chiefly in arranging the fpecies of Sauvages; but it is my opinion now, that the arrangement there given is erroneous, in both combining and feparating fpecies improperly: and it feems to me more proper here to take notice of difeafes, and put them together, according to the affinity of their nature, rather than

by that of their external appearances. I doubt, if even the diſtinction of the Tabes and Atrophia, attempted in the Noſology, will properly apply; as I think there are certain diſeaſes of the ſame nature, which ſometimes appear with, and ſometimes without, fever.

MDCXIX.

After having conſidered the various caſes of emaciations, I ſhould perhaps treat of their cure: but it will readily appear, that the greater part of the caſes above-mentioned are purely ſymptomatic, and conſequently that the cure of them muſt be that of the primary diſeaſes upon which they depend. Of thoſe caſes that can any-wiſe be conſidered as idiopathic, it will appear that they are to be cured, entirely by removing the remote cauſes; the means of accompliſhing which muſt be ſufficiently obvious.

BOOK II.

OF

INTUMESCENTIÆ,

OR

GENERAL SWELLINGS.

MXCXX.

THE ſwellings to be treated of in this place, are thoſe which extend over the whole or a great part of the body; or ſuch at leaſt, as, though of ſmall extent, are however of the ſame nature with thoſe that are more generally extended.

The ſwellings comprehended under this artificial order, are hardly to be diſtinguiſhed from one another otherwiſe than by the matter they contain or conſiſt of: and in this view I have divided the order into four ſections, as the ſwelling happens to contain, 1*ſt*, Oil; 2*d*, Air; 3*d*, A watery fluid; or, 4*th*, As the increaſed bulk depends upon the enlargement of the whole ſubſtance of certain parts, and particularly of one or more of the abdominal viſcera.

CHAP. I.

OF ADIPOSE SWELLINGS.

MDCXXI.

THE only diſeaſe to be mentioned in this chapter, I have, with other Noſologiſts, named *Polyſarcia;* and in Engliſh it may be named Corpulency, or, more ſtrictly, Obeſity; as it is placed here upon the common ſuppoſition of its depending chiefly upon the increaſe of oil in the cellular texture of the body. This corpulency, or obeſity, is in very different degrees in dif-

different perſons, and is often conſiderable without being conſidered as a diſeaſe. There is, however, a certain degree of it, which will be generally allowed to be a diſeaſe; as, for example, when it renders perſons, from a difficult reſpiration, uneaſy in themſelves, and, from the inability of exerciſe, unfit for diſcharging the duties of life to others: and for that reaſon I have given ſuch a diſeaſe a place here. Many phyſicians have conſidered it as an object of practice, and as giving, even in no very high degree, a diſpoſition to many diſeaſes; I am of opinion that it ſhould be an object of practice more frequently than it has been, and therefore that it merits our conſideration here.

MDCXXII.

It may perhaps be alleged, that I have not been ſufficiently correct, in putting the diſeaſe of corpulency as an intume-

ſcentia pinguedinoſa; and therefore implying its being an increaſe of the bulk of the body from an accumulation of oil in the cellular texture only. I am aware of this objection: and as I have already ſaid, that emaciation (MDCII.) depends either upon a general deficiency of fluids in the vaſcular ſyſtem, or upon a deficiency of oil in the cellular texture; ſo I ſhould perhaps have obſerved farther, that the corpulency, or general fulneſs of the body, may depend upon the fulneſs of the vaſcular ſyſtem as well as upon that of the cellular texture. This is true; and for the ſame reaſons I ought, perhaps, after Linnæus and Sagar, to have ſet down plethora as a particular diſeaſe, and as an inſtance of morbid intumeſcence. I have, however, avoided this, as Sauvages and Vogel have done; becauſe I apprehend that plethora is to be conſidered as a ſtate of temperament only, which may indeed diſpoſe to diſeaſe; but not as a diſ-

diseafe in itfelf, unlefs, in the language of the Stahlians, it be a plethora commota, when it produces a diseafe accompanied with particular fymptoms, which give occafion to its being diftinguifhed by a different appellation. Further, it appears to me, that the fymptoms which Linnæus, and more particularly thofe which Sagar employs in the character of plethora, never do occur but when the intumefcentia pinguedinofa has a great fhare in producing them. It is, however, very neceffary to obferve here, that plethora and obefity are generally combined together; and that in fome cafes of corpulency it may be difficult to determine which of the caufes has the greateft fhare in producing it. It is indeed very poffible that a plethora may occur without great obefity; but I apprehend that obefity never happens to a confiderable degree without producing a *plethora ad fpatium* in a great

part of the ſyſtem of the aorta, and therefore a *plethora ad molem* in the lungs, and in the veſſels of the brain.

MDCXXIII.

In attempting the cure of polyſarcia, I am of opinion, that the conjunction of plethora and abeſity, in the manner juſt now mentioned, ſhould be conſtantly attended to; and when the morbid effects of the plethoric habit are threatened, either in the head or lungs, that blood-letting is to be practiſed: but at the ſame time it is to be obſerved, that perſons of much obeſity do not bear blood-letting well; and when the circumſtances I have mentioned do not immediately require it, the practice upon account of obeſity alone, is hardly ever to be employed. The ſame remark is to be made with reſpect to any other evacuations that may be propoſed

for

for the cure of corpulency: for without the other means I am to mention, they can give but a very imperfect relief; and, in so far as they either empty or weaken the system, they may favour the return of plethora, and the increase of obesity.

MDCXXIV.

Polysarcia, or corpulency, whether it depend upon plethora or obesity, whenever it either can be considered as a disease, or threatens to induce one, is to be cured, or the effects of it are to be obviated, by diet and exercise. The diet must be sparing; or rather, what is more admissible, it must be such as affords little nutritious matter. It must therefore be chiefly, or almost only, of vegetable matter, and at the very utmost of milk. Such a diet should be employed, and generally ought to precede exercise: for obesity does

not eaſily admit of bodily exerciſe; which is, however, the only mode that can be very effectual. Such, indeed, in many caſes, may ſeem difficult to be admitted; but I am of opinion, that even the moſt corpulent may be brought to bear it, by at firſt attempting it very moderately, and increaſing it by degrees very ſlowly, but at the ſame time perſiſting in ſuch attempts with great conſtancy.

MDCXXV.

As theſe, though the only effectual meaſures, are often difficult to be admitted or carried into execution, ſome other means have been thought of and employed for reducing corpulency. Theſe, if I miſtake not, have all been certain methods of inducing a ſaline ſtate in the maſs of blood; for ſuch I ſuppoſe to be the effects of vinegar and of ſoap, which have been propoſed,

poſed. The latter, I believe, hardly paſſes into the blood-veſſels, without being reſolved and formed into a neutral ſalt, with the acid which it meets with in the ſtomach. How well acrid and ſaline ſubſtances are fitted to diminiſh obeſity, may appear from what has been ſaid above in MDCXV. What effects vinegar, ſoap, or other ſubſtances employed, have had in reducing corpulency, there have not proper opportunities of obſerving occurred to me: but I am well perſuaded, that the inducing a ſaline and acrid ſtate of the blood, may have worſe conſequences than the corpulency it was intended to correct; and that no perſon ſhould hazard theſe, while he may have recourſe to the more ſafe and certain means of abſtinence and exerciſe.

CHAP.

CHAP. II.

Of Flatulent Swellings.

MDCXXVI.

THE cellular texture of the human body very readily admits of air, and allows the ſame to paſs from any one to every other part of it. Hence Emphyſemata have often appeared from air collected in the cellular texture under the ſkin, and in ſeveral other parts of the body. The flatulent ſwellings under the ſkin, have indeed moſt commonly appeared in conſequence

quence of air immediately introduced from without: but in ſome inſtances of flatulent ſwellings, eſpecially thoſe of the internal parts not communicating with the alimentary canal, ſuch an introduction cannot be perceived or ſuppoſed; and therefore, in theſe caſes, ſome other cauſe of the production and collection of air muſt be looked for, though it is often not to be clearly aſcertained.

In every ſolid as well as every fluid ſubſtance which makes a part of the human body, there is a conſiderable quantity of air in a fixed ſtate, which may be again reſtored to its elaſtic ſtate, and ſeparated from thoſe ſubſtances, by the power of heat, putrefaction, and perhaps other cauſes: but which of theſe may have produced the ſeveral inſtances of pneumatoſis and flatulent ſwellings that have been recorded by authors, I cannot pretend to aſcertain. Indeed, upon account of theſe difficulties,

I cannot proceed with any clearneſs on the general ſubject of pneumatoſis; and, therefore, with regard to flatulent ſwellings, I find it neceſſary to confine myſelf to the conſideration of thoſe of the abdominal region alone; which I ſhall now treat of under the general name of Tympanites.

MDCXXVII.

The tympanites is a ſwelling of the abdomen; in which the teguments appear to be much ſtretched by ſome diſtending power within, and equally ſtretched in every poſture of the body. The ſwelling does not readily yield to any preſſure; and in ſo far as it does, very quickly recovers its former ſtate upon the preſſure being removed. Being ſtruck, it gives a ſound like a drum, or other ſtretched animal membranes. No fluctuation within is

is to be perceived: and the whole feels less weighty than might be expected from its bulk. The uneasiness of the distention is commonly relieved by the discharge of air from the alimentary canal, either upwards or downwards.

MDCXXVIII.

These are the characters by which the tympanites may be distinguished from the ascites or physconia; and many experiments show, that the tympanites always depends upon a preternatural collection of air, somewhere within the teguments of the abdomen: but the seat of the air is in different cases somewhat different; and this produces the different species of the disease.

One species is, when the air collected is entirely confined within the cavity of the alimentary canal, and chiefly in that of the

the inteſtines. This ſpecies, therefore, is named the *Tympanites inteſtinalis*, Sauv. ſp. 1. It is, of all others, the moſt common; and to it eſpecially belong the characters given above.

A ſecond ſpecies is, when the air collected is not entirely confined to the cavity of the inteſtines, but is alſo preſent between their coats; and ſuch is that which is named by Sauvages *Tympanites enterophyſodes*, Sauv. ſp. 3. This has certainly been a rare occurrence; and has probably occurred only in conſequence of the *tympanites inteſtinalis*, by the air eſcaping from the cavity of the inteſtines into the interſtices of the coats. It is, however, poſſible that an eroſion of the internal coat of the inteſtines may give occaſion to the air, ſo conſtantly preſent in their cavity, to eſcape into the interſtices of their coats, though in the whole of their cavity there has been no previous accumulation.

A third ſpecies is, when the air is collected in the ſac of the peritonæum, or what is commonly called the cavity of the abdomen, that is, the ſpace between the peritonæum and viſcera; and then the diſeaſe is named *Tympanites abdominalis*, Sauv. ſp. 2. The exiſtence of ſuch a tympanites, without any *tympanites inteſtinalis*, has been diſputed; and it certainly has been a rare occurrence: but from ſeveral diſſections, it is unqueſtionable that ſuch a diſeaſe has ſometimes truly occurred.

A fourth ſpecies of tympanites is, when the *tympanites inteſtinalis* and *abdominalis* are joined together, or take place at the ſame time. With reſpect to this, it is probable that the *tympanites inteſtinalis* is the primary diſeaſe; and the other, only a conſequence of the air eſcaping, by an eroſion or rupture of the coats of the inteſtines, from the cavity of theſe into that of the abdomen. It is indeed poſſible, that in

in conſequence of eroſion or rupture, the air which is ſo conſtantly preſent in the inteſtinal canal, may eſcape from thence in ſuch quantity into the cavity of the abdomen, as to give a *tympanites abdominalis*, whilſt there was no previous conſiderable accumulation of air in the inteſtinal cavity itſelf; but I have not facts to aſcertain this matter properly.

A fifth ſpecies has alſo been enumerated. It is when a *tympanites abdominalis* happens to be joined with the *hydrops aſcites*; and ſuch a diſeaſe therefore is named by Sauvages *Tympanites aſciticus*, Sauv. ſp. 4. In moſt caſes of tympanites, indeed, ſome quantity of ſerum has, upon diſſection, been found in the ſac of the peritonæum; but that is not enough to conſtitute the ſpecies now mentioned; and when the collection of ſerum is more conſiderable, it is commonly where, both from the cauſes which have preceded, and likewiſe from the

the ſymptoms which attend, the aſcites may be conſidered as the primary diſeaſe; and therefore that this combination does not exhibit a proper ſpecies of the tympanites.

MDCXXIX.

As this laſt is not a proper ſpecies, and as ſome of the others are not only extremely rare, but even, when occurring, are neither primary, nor to be eaſily diſtinguiſhed, nor, as conſidered in themſelves, admitting of any cure, I ſhall here take no further notice of them; confining myſelf, in what follows, to the conſideration of the moſt frequent caſe, and almoſt the only object of practice, the *tympanites inteſtinalis*.

MDCXXX.

With reſpect to this, I cannot perceive

 that

that it arifes in any peculiar temperament, or depends upon any predifpofition, which can be difcerned. It occurs in either fex, at every age, and frequently in young perfons.

MDCXXXI.

Various remote caufes of it have been affigned: but many of thefe have not commonly the effect of producing this difeafe; and although fome of them have been truly antecedents of it, I can in few inftances difcover the manner in which they produce the difeafe, and therefore cannot certainly afcertain them to have been caufes of it.

MDCXXXII.

The phenomena of this difeafe in its feveral ftages are the following.

The

The tumour of the belly fometimes grows very quickly to a confiderable degree, and feldom in the flow manner the afcites commonly comes on. In fome cafes, however, the tympanites comes on graduaally, and is introduced by an unufual flatulency of the ftomach and inteftines, with frequent borborygmi, and an uncommonly frequent expulfion of air upwards and downwards. This ftate is alfo frequently attended with colic pains, efpecially felt about the navel, and upon the fides towards the back; but generally as the difeafe advances, thefe pains become lefs confiderable. As the difeafe advances, there is a pretty conftant defire to difcharge air, but it is accomplifhed with difficulty; and when obtained, although it give fome relief from the fenfe of diftention, this relief is commonly tranfient and of fhort duration. While the difeafe is coming on, fome inequality of tumour and

tenſion may be perceived in different parts of the belly; but the diſtention ſoon becomes equal over the whole, and exhibits the phenomena mentioned in the character. Upon the firſt coming on of the diſeaſe, as well as during its progreſs, the belly is bound, and the fæces diſcharged are commonly hard and dry. The urine, at the beginning, is uſually very little changed in quantity or quality from its natural ſtate: but as the diſeaſe continues, it is commonly changed in both reſpects; and at length ſometimes a ſtrangury, and even an iſchuria, comes on. The diſeaſe has ſeldom advanced far, before the appetite is much impaired, and digeſtion ill performed; and the whole body, except the belly, becomes conſiderably emaciated. Together with theſe ſymptoms, a thirſt and uneaſy ſenſe of heat at length come on, and a conſiderable frequency of pulſe occurs, which continues

nues throughout the courſe of the diſeaſe. When the tumour of the belly ariſes to a conſiderable bulk, the breathing becomes very difficult, with a frequent dry cough. With all theſe ſymptoms the ſtrength of the patient declines; and the febrile ſymptoms daily increaſing, death at length enſues, ſometimes probably in conſequence of a gangrene coming upon the inteſtines.

MDCXXXIII.

The tympanites is commonly of ſome duration, and to be reckoned a chronic diſeaſe. It is very ſeldom quickly fatal, except where ſuch an affection ſuddenly ariſes in fevers. To this Sauvages has properly given a different appellation, that of *Meteoriſmus*; and I judge it may always be conſidered as a ſymptomatic af-

fection, entirely diſtinct from the tympanites we are now conſidering.

MDCCXXXIV.

The tympanites is generally a fatal diſeaſe, ſeldom admitting of cure; but what may be attempted in this way, I ſhall try to point out, after I ſhall have endeavoured to explain the proximate cauſe, which alone can lay the foundation of what may be rationally attempted towards its cure.

MDCCXXXV.

To aſcertain the proximate cauſe of tympanites, is ſomewhat difficult. It has been ſuppoſed in many caſes, to be merely an uncommon quantity of air preſent in the alimentary canal, owing to the extrication and detachment of a greater quantity

tity of air than uſual from the alimentary matters taken it. Our vegetable aliments, I believe, always undergo ſome degree of fermentation; and in conſequence, a quantity of air is extricated and detached from them in the ſtomach and inteſtines: but it appears, that the mixture of the animal fluids which our aliments meet with in the alimentary canal, prevents the ſame quantity of air from being detached from them that would have been in their fermentation without ſuch mixture; and it is probable that the ſame mixture contributes alſo to the reabſorption of the air that had been before in ſome meaſure detached. The extrication, therefore, of an unuſual quantity of air from the aliments, may, in certain circumſtances, be ſuch, perhaps, as to produce a tympanites; ſo that this diſeaſe may depend upon a fault of the digeſtive fluids, whereby they are unfit to prevent the too copious extrica-

tion of air, and unfit alſo to occaſion that reabſorption of air which in ſound perſons commonly happens. An unuſual quantity of air in the alimentary canal, whether owing to the nature of the aliments taken in, or to the fault of the digeſtive fluid, does certainly ſometimes take place; and may poſſibly have, and in ſome meaſure certainly has, a ſhare in producing certain flatulent diſorders of the alimentary canal; but cannot be ſuppoſed to produce the tympanites, which often occurs when no previous diſorder had appeared in the ſyſtem. Even in thoſe caſes of tympanites which are attended at their beginning with flatulent diſorders in the whole of the alimentary canal, as we know that a firm tone of the inteſtines both moderates the extrication of air, and contributes to its reabſorption or ready expulſion, ſo the flatulent ſymptoms which happen to appear at the coming on of a tym-

tympanites, are, in my opinion, to be referred to a loſs of tone in the muſcular fibres of the inteſtines, rather than to any fault in the digeſtive fluids.

MDCCXXXVI.

Theſe, and other conſiderations, lead me to conclude, that the chief part of the proximate cauſe of tympanites, is a loſs of tone in the muſcular fibres of the inteſtines. But further, as air of any kind accumulated in the cavity of the inteſtines ſhould, even by its own elaſticity, find its way either upwards or downwards, and ſhould alſo, by the aſſiſtance of inſpiration, be entirely thrown out of the body; ſo, when neither the reabſorption nor the expulſion takes place, and the air is accumulated ſo as to produce tympanites, it is probable that the paſſage of the air along the courſe of the inteſtines is in ſome places

places of theſe interrupted. This interruption, however, can hardly be ſuppoſed to proceed from any other cauſe than ſpaſmodic conſtrictions in certain parts of the canal; and I conclude, therefore, that ſuch conſtrictions concur as part in the proximate cauſe of tympanites. Whether theſe ſpaſmodic conſtrictions are to be attribubuted to the remote cauſe of the diſeaſe, or may be conſidered as the conſequence of ſome degree of atony firſt ariſing, I cannot with certainty, and do not find it neceſſary to determine.

MDCXXXVII.

Having thus endeavoured to aſcertain the proximate cauſe of tympanites, I proceed to treat of its cure; which indeed has ſeldom ſucceeded, and almoſt never but in a recent diſeaſe. I muſt, however, endeavour to ſay what may be reaſonably at-

attempted; what has commonly been attempted; and what attempts have sometimes succeeded in the cure of this disease.

MDCCXXXVIII.

It muſt be a firſt indication to evacuate the air accumulated in the inteſtines: and for this purpoſe it is neceſſary that thoſe conſtrictions, which had eſpecially occaſioned its accumulation, and continue to interrupt its paſſage along the courſe of the inteſtines, ſhould be removed. As theſe, however, can hardly be removed but by exciting the periſtaltic motion in the adjoining portions of the inteſtines, purgatives have been commonly employed; but it is at the ſame time agreed, that the more gentle laxatives only ought to be employed, as the more draſtic, in the over ſtretched and tenſe

tenſe ſtate of the inteſtines, are in danger of bringing on inflammation.

It is for this reaſon, alſo, that glyſters have been frequently employed; and they are the more neceſſary, as the fæces collected are generally found to be in a hard and dry ſtate. Not only upon account of this ſtate of the fæces, but, farther, when glyſters produce a conſiderable evacuation of air, and thus ſhow that they have ſome effect in relaxing the ſpaſms of the inteſtines, they ought to be repeated very frequently.

MDCXXXIX.

In order to take off the conſtrictions of the inteſtines, and with ſome view alſo to the carminative effects of the medicines, various antiſpaſmodics have been propoſed, and commonly employed; but their effects are ſeldom conſiderable, and it is

alleged that their heating and inflammatory powers have ſometimes been hurtful. It is, however, always proper to join ſome of the milder kinds with both the purgatives and glyſters that are employed; and it has been very properly adviſed to give always the chief of antiſpaſmodics, that is, an opiate, after the operation of purgatives is finiſhed.

MDCXL.

In conſideration of the overſtretched, tenſe, and dry ſtate of the inteſtines, and eſpecially of the ſpaſmodic conſtrictions that prevail, fomentations and warm bathing have been propoſed as a remedy; and are ſaid to have been employed with advantage: but it has been remarked, that very warm baths have not been found ſo uſeful as tepid baths long continued.

MDCXLI.

MDCXLI.

Upon the ſuppoſition that this diſeaſe depends eſpecially upon an atony of the alimentary canal, tonic remedies ſeem to be properly indicated. Accordingly chalybeates, and various bitters, have been employed; and, if any tonic, the Peruvian bark might probably be uſeful.

MDCXLII.

But as no tonic remedy is more powerful than cold applied to the ſurface of the body, and cold drink thrown into the ſtomach; ſo ſuch a remedy has been thought of in this diſeaſe. Cold drink has been conſtantly preſcribed, and cold bathing has been employed with advantage; and there have been ſeveral inſtances of the diſeaſe being ſuddenly and entirely cured by the

the repeated application of ſnow to the lower belly.

MDCXLIII.

It is hardly neceſſary to remark, that, in the diet of tympanitic perſons, all ſorts of food ready to become flatulent in the ſtomach are to be avoided; and it is probable, that the foſſil acids and neutral ſalts, as antizymics, may be uſeful.

MDCXLIV.

In obſtinate and deſperate caſes of tympanites, the operation of the paracenteſis has been propoſed: but it is a very doubtful remedy, and there is hardly any teſtimony of its having been practiſed with ſucceſs. It muſt be obvious, that this operation is a remedy ſuited eſpecially, and almoſt only, to the *tympanites abdominalis*; the exiſtence

existence of which, separately from the *intestinalis*, is very doubtful, at least not easily ascertained. Even if its existence could be ascertained, yet it is not very likely to be cured by this remedy: and how far the operation might be safe in the *tympanites intestinalis*, is not yet determined by any proper experience.

CHAP.

CHAP. III.

Of Watery Swellings, or Dropsies.

MDCXLV.

A Preternatural collection of serous or watery fluids, is often formed in different parts of the human body; and although the disease thence arising be distinguished according to the different parts which it occupies, yet the whole of such collections come under the general

appellation of Dropſies. At the ſame time, although the particular inſtances of ſuch collection are to be diſtinguiſhed from each other according to the parts they occupy, as well as by other circumſtances attending them; yet all of them ſeem to depend upon ſome general cauſes, very much in common to the whole. Before proceeding, therefore, to conſider the ſeveral ſpecies, it may be proper to endeavour to aſſign the general cauſes of dropſy.

MDCXLVI.

In perſons in health, a ſerous or watery fluid ſeems to be conſtantly poured out, or exhaled in vapour, into every cavity and interſtice of the human body capable of receiving it; and the ſame fluid, without remaining long or being accumulated in theſe ſpaces, ſeems conſtantly to be ſoon again abſorbed from thence by veſſels adapted

apted to the purpoſe. From this view of the animal œconomy, it will be obvious, that if the quantity poured out into any ſpace, happens to be greater than the abſorbents can at the ſame time take up, an unuſual accumulation of ſerous fluid will be made in ſuch parts; or though the quantity poured out be not more than uſual, yet if the abſorption be anywiſe interrupted or diminiſhed, from this cauſe alſo an unuſual collection of fluids may be occaſioned.

Thus, in general, dropſy may be imputed to an increaſed effuſion, or to a diminiſhed abſorption; and I therefore proceed to inquire into the ſeveral cauſes of theſe.

MDCXLVII.

An increaſed effuſion may happen, either from a preternatural increaſe of the

ordinary exhalation, or from the rupture of veſſels carrying, or of ſacs containing, ſerous or watery fluids.

MDCXLVIII.

The ordinary exhalation may be increaſed by various cauſes, and particularly by an interruption given to the free return of the venous blood from the extreme veſſels of the body to the right ventricle of the heart. This interruption ſeems to operate by reſiſting the free paſſage of the blood from the arteries into the veins, thereby increaſing the force of the arterial fluids in the exhalants, and conſequently the quantity of fluid which they pour out.

MDCXLIX.

The interruption of the free return of the venous blood from the extreme veſ-

ſels, may be owing to certain circumſtances affecting the courſe of the venous blood; very frequently, to certain conditions in the right ventricle of the heart itſelf, preventing it from receiving the uſual quantity of blood from the vena cava; or to obſtructions in the veſſels of the lungs preventing the entire evacuation of the right ventricle, and thereby hindering its receiving the uſual quantity of blood from the cava. Thus, a polypus in the right ventricle of the heart, and the oſſification of its valves, as well as all conſiderable and permanent obſtructions of the lungs, have been found to be cauſes of dropſy.

MDCL.

It may ſerve as an illuſtration of the operation of theſe general cauſes, to remark, that the return of the venous blood is in ſome meaſure reſiſted when the po-

ſture of the body is ſuch as gives occaſion to the gravity of the blood to oppoſe the motion of it in the veins, which takes effect when the force of the circulation is weak; and from whence it is that an upright poſture of the body produces or increaſes ſerous ſwellings in the lower extremities.

MDCLI.

Not only thoſe cauſes interrupting the motion of the venous blood more generally, but, farther, the interruption of it in particular veins, may likewiſe have the effect of increaſing exhalation, and producing dropſy. The moſt remarkable inſtance of this is, when conſiderable obſtructions of the liver prevent the blood from flowing freely into it from the vena portarum and its numerous branches; and hence theſe obſtructions are a frequent cauſe of dropſy.

MDCLII.

Scirrhoſities of the ſpleen and other viſcera, as well as the ſcirrhoſity of the liver, have been conſidered as cauſes of dropſy; but the manner in which they can produce the diſeaſe, I do not perceive, except it may be where they happen to be near ſome conſiderable vein, by the compreſſion of which they may occaſion ſome degree of aſcites; or, by compreſſing the vena cava, may produce an anaſarca of the lower extremities. It is indeed true, that ſcirrhoſities of the ſpleen and other viſcera, have been frequently diſcovered in the bodies of hydropic perſons: but I believe they have been ſeldom found unleſs when ſcirrhoſities of the liver were alſo preſent; and I am inclined to think, that the former have been the effects of the latter, rather than the cauſe of the dropſy;

or that, if ſcirrhoſities of the other viſcera have appeared in hydropic bodies when that of the liver was not preſent, they muſt have been the effects of ſome of thoſe cauſes of dropſy to be hereafter mentioned; and conſequently to be the accidental attendants, rather than the cauſes, of ſuch dropſies.

MDCLIII.

Even in ſmaller portions of the venous ſyſtem, the interruption of the motion of the blood in particular veins has had the ſame effect. Thus, a polypus formed in the cavity of a vein, or tumours formed in its coats, preventing the free paſſage of the blood through it, have had the effect of producing dropſy in parts towards the extremity of ſuch veins.

MDCLIV.

MDCLIV.

But the cauſe moſt frequently interrupting the motion of the blood through the veins is, the compreſſion of tumours exiſting near to them; ſuch as aneuriſms in the arteries, abſceſſes, and ſcirrhous or ſteatomatous tumours in the adjoining parts.

To this head, may be referred, the compreſſion of the deſcending cava by the bulk of the uterus in pregnant women, and the compreſſion of the ſame by the bulk of water in the aſcites; both of which compreſſions frequently produce ſerous ſwellings in the lower extremities.

MDCLV.

It may be ſuppoſed, that a general preternatural plethora of the venous ſyſtem may have the effect of increaſing exhalation; and that this plethora may happen from

from the ſuppreſſion of fluxes, or evacuations of blood, which had for ſome time taken place in the body, ſuch as the menſtrual and hemorrhoidal fluxes. A dropſy, however, from ſuch a cauſe, has been at leaſt a rare occurrence; and when it ſeems to have happened, I ſhould ſuppoſe it owing to the ſame cauſes as the ſuppreſſion itſelf, rather than to the plethora produced by it.

MDCLVI.

One of the moſt frequent cauſes of an increaſed exhalation, I apprehend to be the laxity of the exhalant veſſels. That ſuch a cauſe may operate, appears probable from this, that paralytic limbs, in which ſuch a laxity is to be ſuſpected, are frequently affected with ſerous, or, as they are called, œdematous ſwellings.

But a much more remarkable and frequent

quent example of its operation occurs in the case of a general debility of the syftem, which is fo often attended with dropfy. That a general debility does induce dropfy, appears fufficiently from its being fo commonly the confequence of powerfully debilitating caufes; fuch as fevers, either of the continued or intermittent kind, which have lafted long; long-continued and fomewhat exceffive evacuations of any kinds; and in fhort, almoft all difeafes that have been of long continuance, and have at the fame time induced the other fymptoms of a general debility.

Among other caufes inducing a general debility of the fyftem, and thereby dropfy, there is one to be mentioned as frequently occurring, and that is, intemperance in the ufe of intoxicating liquors; from whence it is that drunkards of all kinds, and efpecially dram-drinkers, are fo affected with this difeafe.

MDCLVII.

That a general debility may produce a laxity of the exhalants, will be readily allowed; and that by this eſpecially it occaſions dropſy, I judge from thence, that while moſt of the cauſes already mentioned are ſuited to produce dropſies of particular parts only, the ſtate of general debility gives riſe to an increaſed exhalation into every cavity and interſtice of the body, and therefore brings on a general diſeaſe. Thus, we have ſeen effuſions of a ſerous fluid made, at the ſame time, into the cavity of the cranium, into that of the thorax and of the abdomen, and likewiſe into the cellular texture almoſt over the whole of the body. In ſuch caſes, the operation of a general cauſe diſcovered itſelf, by theſe ſeveral dropſies increaſing in one part as they diminiſhed in another, and this alternately in the different parts.

parts. This combination, therefore, of the different ſpecies of dropſy, or rather, as it may be termed, this univerſal dropſy, muſt, I think, be referred to a general cauſe; and in moſt inſtances, hardly any other can be thought of, but a general laxity of the exhalants. It is this, therefore, that I call the *hydropic diathesis*; which frequently operates by itſelf; and frequently, in ſome meaſure, concurring with other cauſes, is eſpecially that which gives them their full effect.

This ſtate of the ſyſtem, in its firſt appearance, ſeems to be what has been conſidered as a particular diſeaſe under the name of *Cachexy*; but in every inſtance of it that has occurred to me, I have always conſidered, and have always found, it to be the beginning of general dropſy.

MDCLVIII.

MDCLVIII.

The ſeveral cauſes of dropſy already mentioned may produce the diſeaſe, altho' there be no preternatural abundance of ſerous or watery fluid in the blood-veſſels; but it is now to be remarked, that a preternatural abundance of that kind may often give occaſion to the diſeaſe, and more eſpecially when ſuch abundance concurs with the cauſes above enumerated.

One cauſe of ſuch preternatural abundance may be an unuſual quantity of water taken into the body. Thus an unuſual quantity of water taken in by drinking, has ſometimes occaſioned a dropſy. Large quantities of water, it is true, are upon many occaſions taken in; and being as readily thrown out again by ſtool, urine, or perſpiration, have not produced any diſeaſe. But it is alſo cer-

tain, that, upon ſome occaſions, an unuſual quantity of watery liquors taken in has run off by the ſeveral internal exhalants, and produced a dropſy. This ſeems to have happened, either from the excretories not being fitted to throw out the fluid ſo faſt as it had been taken in, or from the excretories having been obſtructed by accidentally concurring cauſes. Accordingly it is ſaid, that the ſudden taking in of a large quantity of very cold water, has produced dropſy, probably from the cold producing a conſtriction of the excretories.

The proportion of watery fluid in the blood may be increaſed, not only by the taking in a large quantity of water by drinking, as now mentioned, but it is poſſible that it may be increaſed alſo by water taken in from the atmoſphere by the ſkin in an abſorbing or imbibing ſtate. It is well known that the ſkin may

be,

be, at leaſt, occaſionally in ſuch a ſtate; and it is probable, that in many caſes of beginning dropſy, when the circulation of the blood on the ſurface of the body is very languid, that the ſkin may be changed from a perſpiring, to an imbibing, ſtate; and thus, at leaſt, the diſeaſe may be very much increaſed.

MDXCLIX.

A ſecond cauſe of a preternatural abundance of watery fluids in the blood-veſſels, may be, an interruption of the ordinary watery excretions; and accordingly it is alleged, that perſons much expoſed to a cold and moiſt air are liable to dropſy. It is alſo ſaid, that an interruption, or conſiderable diminution, of the urinary ſecretion, has produced the diſeaſe: and it is certain, that, in the caſe of an *iſchuria renalis*, the ſeroſity retained in the blood-veſſels has been poured out into

ſome

ſome internal cavities, and has occaſioned dropſy.

MDCLX.

A third cauſe, of an over-proportion of ſerous fluid in the blood ready to run off by the exhalants, has been very large evacuations of blood, either ſpontaneous or artificial. Theſe evacuations, by abſtracting a large proportion of red globules and gluten, which are the principal means of retaining ſerum in the red veſſels, allow the ſerum to run off more readily by the exhalants: and hence dropſies have been frequently the conſequence of ſuch evacuations.

It is poſſible alſo, that large and long-continued iſſues, by abſtracting a large proportion of gluten, may have the ſame effect.

An over-proportion of the ſerous parts

of the blood, may not only be owing to the *ſpoliation* juſt now mentioned, but may, I apprehend, be likewiſe owing to a fault in the digeſting and aſſimilating powers in the ſtomach and other organs; whereby they do not prepare and convert the aliments taken in, in ſuch a manner as to produce from them the due proportion of red globules and gluten; but, ſtill continuing to ſupply the watery parts, occaſion theſe to be in an over-proportion, and conſequently ready to run off in too large quantity by the exhalants. It is in this manner that we explain the dropſy, ſo often attending chloroſis: which appears always at firſt by a pale colour of the whole body, ſhowing a manifeſt deficiency of red blood; which in that diſeaſe can only be attributed to an imperfect digeſtion and aſſimilation.

Whether a like imperfection takes place in what has been called a *Cachexy*, I dare not

not determine. This diſeaſe indeed has been commonly and very evidently owing to the general cauſes of debility above mentioned: and it being probable that the general debility may affect the organs of digeſtion and aſſimilation; ſo the imperfect ſtate of theſe functions, occaſioning a deficiency of red globules and gluten, may often concur with the laxity of the exhalants in producing dropſy.

MDCLXI.

Theſe are the ſeveral cauſes of increaſed exhalation, which I have mentioned as the chief cauſe of the effuſion producing dropſy; but I have likewiſe obſerved in MDCLXVII. that with the ſame effect, an effuſion may alſo be made by the rupture of veſſels carrying watery fluids.

In this way, a rupture of the thoracic duct, has given occaſion to an effuſion of

chyle and lymph into the cavity of the thorax; and a rupture of the lacteals has occasioned a like effusion into the cavity of the abdomen; and in either case, a dropsy has been produced.

It is sufficiently probable, that a rupture of lymphatics, in consequence of strains, or the violent compression of neighbouring muscles, has occasioned an effusion; which, being diffused in the cellular texture, has produced dropsy.

It belongs to this head of causes, to remark, that there are many instances of a rupture or erosion of the kidneys, ureters, and bladder of urine; whereby the urine has been poured into the cavity of the abdomen, and produced an ascites.

MDCLXII.

Upon this subject, of the rupture of vessels carrying, or of vesicles containing, watery

watery fluids, I muſt obſerve, that the diſſection of dead bodies has often ſhown veſicles formed upon the ſurface of many of the internal parts; and it has been ſuppoſed, that the rupture of ſuch veſicles, commonly named *Hydatides*, together with their continuing to pour out a watery fluid, has been frequently the cauſe of dropſy. I cannot deny the poſſibility of ſuch a cauſe, but ſuſpect the matter muſt be explained in a different manner.

There have been frequently found, in almoſt every different part of animal bodies, collections of ſpherical veſicles, containing a watery fluid; and in many caſes of ſuppoſed dropſy, particularly in thoſe called the preternatural encyſted dropſies, the ſwelling has been entirely owing to a collection of ſuch hydatides. Many conjectures have been formed with regard to the nature and production of theſe veſicles; but the matter at laſt ſeems to be

 aſcertained.

afcertained. It feems to be certain, that each of thefe veficles has within it, or annexed to it, a living animal of the worm kind; which feems to have the power of forming a veficle for the purpofe of its own œconomy, and of filling it with a watery fluid drawn from the neighbouring parts: and this animal has therefore been properly named by late naturalifts, the *Tænia hydatigena*. The origin and œconomy of this animal, or an account of the feveral parts of the human body which it occupies, I cannot profecute further here; but it was proper for me, in delivering the caufes of dropfy, to fay thus much of hydatides: and I muft conclude with obferving, I am well perfuaded, that moft of the inftances of preternatural encyfted dropfies which have appeared in many different parts of the human body, have been truly collections of fuch hydatides; but how the fwellings occafioned by

by theſe are to be diſtinguiſhed from other ſpecies of dropſy, or how they are to be treated in practice, I cannot at preſent determine.

MDCLXIII.

After having mentioned theſe, I return to conſider the other general cauſe of dropſy, which I have ſaid in MDCXLVI. may be, An interruption or diminution of the abſorption that ſhould take up the exhaled fluids from the ſeveral cavities and interſtices of the body; the cauſes of which interruption, however, are not eaſily aſcertained.

MDCLXIV.

It ſeems probable, that abſorption may be diminiſhed, and even ceaſe altogether, from a loſs of tone in the abſorbent extremities

of the lymphatics. I cannot indeed doubt that a certain degree of tone or active power is neceſſary in theſe abſorbent extremities; and it appears probable, that the ſame general debility which produces that laxity of the exhalant veſſels, wherein I have ſuppoſed the hydropic diatheſis to conſiſt, will at the ſame time occaſion a loſs of tone in the abſorbents; and therefore that a laxity of the exhalants will generally be accompanied with a loſs of tone in the abſorbents; and that this will have a ſhare in the production of dropſy. Indeed it is probable that the diminution of abſorption has a conſiderable ſhare in the matter; as dropſies are often cured by medicines which ſeem to operate by exciting the action of the abſorbents.

MDCLXV.

It has been ſuppoſed, that the abſorption per-

performed by the extremities of lymphatics may be interrupted by an obſtruction of theſe veſſels, or at leaſt of the conglobate glands through which theſe veſſels paſs. This, however, is very doubtful. As the lymphatics have branches frequently communicating with one another, it is not probable that the obſtruction of any one, or even ſeveral of theſe, can have any conſiderable effect in interrupting the abſorption of their extremities.

And for the ſame reaſon, it is as little probable that the obſtruction of conglobate glands can have ſuch an effect: at leaſt it is only an obſtruction of the glands of the meſentery, through which ſo conſiderable a portion of the lymph paſſes, that can poſſibly have the effect of interrupting abſorption. But even this we ſhould not readily ſuppoſe, there being reaſon to believe that theſe glands, even in a conſiderably tumefied ſtate, are not entirely ob-

obſtructed: And accordingly I have known ſeveral inſtances of the moſt part of the meſenteric glands being conſiderably tumefied, without either interrupting the tranſmiſſion of fluids to the blood-veſſels, or occaſioning any dropſy.

An hydropic ſwelling, indeed, ſeems often to affect the arm from a tumour of the axillary gland: but it ſeems to me doubtful, whether the tumour of the arm may not be owing to ſome compreſſion of the axillary vein, rather than to an obſtruction of the lymphatics.

MDCLXVI.

A particular interruption of abſorption may be ſuppoſed to take place in the brain. As no lymphatic veſſels have yet very certainly been diſcovered in that organ, it may be thought that the abſorption, which certainly takes place there, is performed

formed by the extremities of veins, or by veſſels that carry the fluid directly into the veins; ſo that any impediment to the free motion of the blood in the veins of the brain, may interrupt the abſorption there, and occaſion that accumulation of ſerous fluid which ſo frequently occurs from a congeſtion of blood in theſe veins. But I give all this as a matter of conjecture only.

MDCLXVII.

Having thus explained the general cauſes of dropſy, I ſhould proceed, in the next place, to mention the ſeveral parts of the body in which ſerous collections take place, and ſo to mark the different ſpecies of dropſy: but I do not think it neceſſary for me to enter into any minute detail upon this ſubject. In many caſes, theſe collections are not to be aſcertained by any

any external ſymptoms, and therefore cannot be the objects of practice; and many of them, though in ſome meaſure diſcernible, do not ſeem to be curable by our art. I the more eſpecially avoid mentioning very particularly the ſeveral ſpecies, becauſe that has already been ſufficiently done by Dr D. Monro, and other writers, in every body's hands. I muſt confine myſelf here to the conſideration of thoſe ſpecies which are the moſt frequently occurring and the moſt common objects of our practice; which are, the Anaſarca, Hydrothorax, and Aſcites; and each of theſe I ſhall treat in ſo many ſeparate ſections.

SECT.

SECT. I.

Of ANASARCA.

MDCLXVIII.

THE Anaſarca is a ſwelling upon the ſurface of the body, at firſt commonly appearing in particular parts only, but at length frequently appearing over the whole. So far as it extends, it is an uniform ſwelling over the whole member, at firſt always ſoft, and readily receiving the preſſure of the finger, which forms a hollow that remains for ſome little time after

after the preſſure is removed, but at length riſes again to its former fulneſs. This ſwelling generally appears, firſt, upon the lower extremities; and there too only in the evening, diſappearing again in the morning. It is uſually more conſiderable as the perſon has been more in an erect poſture during the day; but there are many inſtances of the exercise of walking preventing altogether its otherwiſe uſual coming on. Although this ſwelling appears at firſt only upon the feet and about the ankles; yet if the cauſes producing it continue to act, it gradually extends upwards, occupying the legs, thighs, and trunk of the body, and ſometimes even the head. Commonly the ſwelling of the lower extremities diminiſhes during the night; and in the morning, the ſwelling of the face is moſt conſiderable, which again generally diſappears almoſt entirely in the courſe of the day.

MDCLXIX.

MDCLXIX.

The terms of *Anaſarca* and *Leucophlegmatia* have been commonly conſidered as ſynonimous; but ſome authors have propoſed to conſider them as denoting diſtinct diſeaſes. The authors who are of this laſt opinion employ the name of *Anaſarca* for that diſeaſe which begins in the lower extremities, and is from thence gradually extended upwards in the manner I have juſt now deſcribed; while they term *Leucophlegmatia*, that in which the ſame kind of ſwelling appears even at firſt very generally over the whole body. They ſeem to think alſo, that the two diſeaſes proceed from different cauſes; and that, while the anaſarca may ariſe from the ſeveral cauſes in MDCXLVIII.—MDCLIX. the leucophlegmatia proceeds eſpecially from a deficiency of red blood, as we have mentioned in MDCLX. *et ſeq.* I cannot, however, find

find any proper foundation for this diſtinction. For although in dropſies proceeding from the cauſes mentioned in MDCLX, *et ſeq.* the diſeaſe appears in ſome caſes more immediately affecting the whole body; yet that does not eſtabliſh a difference from the common caſe of anaſarca: for the diſeaſe, in all its circumſtances, comes at length to be entirely the ſame; and in caſes occaſioned by a deficiency of red blood, I have frequently obſerved it to come on exactly in the manner of an anaſarca, as above deſcribed.

MDCLXX.

An *anaſarca* is evidently a preternatural collection of ſerous fluid in the cellular texture immediately under the ſkin. Sometimes pervading the ſkin itſelf, it oozes out through the pores of the cuticle; and ſometimes, too groſs to paſs by theſe, it raiſes the cuticle in bliſters.

Sometimes the ſkin, not allowing the water to pervade it, is compreſſed and hardened, and at the ſame time ſo much diſtended, as to give anaſarcous tumours an unuſual firmneſs. It is in theſe laſt circumſtances alſo that an erythematic inflammation is ready to come upon anaſarcous ſwellings.

MDCLXXI.

An anaſarca may immediately ariſe from any of the ſeveral cauſes of dropſy which act more generally upon the ſyſtem: and even when other ſpecies of dropſy, from particular circumſtances, appear firſt; yet whenever theſe proceed from any cauſes more generally affecting the ſyſtem, an anaſarca ſooner or later comes always to be joined with them.

MDCLXXII.

The manner in which this diſeaſe commonly firſt appears, will be readily explained by what I have ſaid in MDCL. reſpecting the effects of the poſture of the body. Its gradual progreſs, and its affecting, after ſome time, not only the cellular texture under the ſkin, but probably alſo much of the ſame texture in the internal parts, will be underſtood partly from the communication that is readily made between the ſeveral parts of the cellular texture; but eſpecially from the ſame general cauſes of the diſeaſe producing their effects in every part of the body. It appears to me, that the water of anaſarcous ſwellings is more readily communicated to the cavity of the thorax, and to the lungs, than to the cavity of the abdomen, or to the viſcera contained in it.

MDCLXXIII.

MDCLXXIII.

An anaſarca is almoſt always attended with a ſcarcity of urine; and the urine voided, is, from its ſcarcity, always of a high colour; and from the ſame cauſe, after cooling, readily lets fall a copious reddiſh ſediment. This ſcarcity of urine may ſometimes be owing to an obſtruction of the kidneys; but probably is generally occaſioned by the watery parts of the blood running off into the cellular texture, and being thereby prevented from paſſing in the uſual quantity to the kidneys.

The diſeaſe is alſo generally attended with an unuſual degree of thirſt; a circumſtance I would attribute to a like abſtraction of fluid from the tongue and fauces, which are extremely ſenſible to every diminution of the fluids in theſe parts.

MDCLXXIV.

The cure of anaſarca is to be attempted upon three general indications.

1. The removing the remote cauſes of the diſeaſe.

2. The evacuation of the ſerous fluid already collected in the cellular texture.

3. The reſtoring the tone of the ſyſtem, the loſs of which may be conſidered in many caſes as the proximate cauſe of the diſeaſe.

MDCLXXV.

The remote cauſes are very often ſuch as had not only been applied, but had alſo been removed, long before the diſeaſe came on. Although, therefore, their effects remain, the cauſes themſelves cannot be the objects of practice; but if the cauſes ſtill continue to be applied, ſuch as intempe-

rance,

rance, indolence, and ſome others; they muſt be removed. For the moſt part, the remote cauſes are certain diſeaſes previous to the dropſy, which are to be cured by the remedies particularly adapted to them, and cannot be treated of here. The curing of theſe, indeed, may be often difficult; but it was proper to lay down the preſent indication, in order to ſhow, that when theſe remote cauſes cannot be removed, the cure of the dropſy muſt be difficult, or perhaps impoſſible. In many caſes, therefore, the following indications will be to little purpoſe; and particularly, that often the execution of the ſecond will not only give the patient a great deal of fruitleſs trouble, but commonly alſo hurry on his fate.

MDCLXXVI.

The ſecond indication for evacuating the collected ſerum, may be ſometimes

executed with advantage, and often, at leaſt, with temporary relief. It may be perform-ed in two ways. Firſt, by drawing off the water directly from the dropſical part, by openings made into it for that purpoſe: Or, ſecondly, by exciting certain ſerous excretions; in conſequence of which, an abſorption may be excited in the dropſical parts, and thereby the ſerum abſorbed and carried into the blood-veſſels, may after-wards be directed to run out, or may ſpon-taneouſly paſs out, by one or other of the common excretions.

MDCLXXVII.

In an anaſarca, the openings into the dropſical part are commonly to be made in ſome part of the lower extremities; and will be moſt properly made by many ſmall punctures reaching the cellular texture. Formerly, conſiderable inciſions were em-

ployed

ployed for this purpoſe: but as any wound made in dropſical parts, which, in order to their healing, muſt neceſſarily inflame and ſuppurate, are liable to become gangrenous; ſo it is found to be much ſafer to make the openings by ſmall punctures only, which may heal up by the firſt intention. At the ſame time, even with reſpect to theſe punctures, it is proper to obſerve, that they ſhould be made at ſome diſtance from one another, and that care ſhould be taken to avoid making them in the moſt depending parts.

MDCLXXVIII.

The water of anaſarcous limbs may be ſometimes drawn off by pea-iſſues, made by cauſtic a little below the knees: for as the great ſwelling of the lower extremities is chiefly occaſioned by the ſerous fluid exhaled into the upper parts conſtantly

falling down to the lower; ſo the iſſues now mentioned, by evacuating the water from theſe upper parts, may very much relieve the whole of the diſeaſe. Unleſs, however, the iſſues be put in before the diſeaſe is far advanced, and before the parts have very much loſt their tone, the places of the iſſues are ready to become affected with gangrene.

Some practical writers have adviſed the employment of ſetons for the ſame purpoſe that I have propoſed iſſues; but I apprehend, that ſetons will be more liable than iſſues to the accident juſt now mentioned.

MDCLXXIX.

For the purpoſe of drawing out ſerum from anaſarcous limbs, bliſters have been applied to them, and ſometimes with great ſucceſs; but the bliſtered parts are ready

to

to have a gangrene come upon them. Bliſtering is therefore to be employed with great caution; and perhaps only in the circumſtances that I have mentioned above to be fit for the employment of iſſues.

MDCLXXX.

Colewort-leaves applied to the ſkin, readily occaſion a watery exſudation from its ſurface; and applied to the feet and legs affected with anaſarca, have ſometimes drawn off the water very copiouſly, and with great advantage.

Analogous, as I judge, to this, oiled ſilk-hoſe put upon the feet and legs, ſo as to ſhut out all communication with the external air, have been found ſometimes to draw a quantity of water from the pores of the ſkin, and are ſaid in this way to have relieved anaſarcous ſwellings: but in ſeveral trials made, I have never found either the appli-

application of theſe hoſe, or that of the colewort-leaves, of much ſervice.

MDCLXXXI.

The 2d means propoſed in MDCLXXVI. for drawing off the water from dropſical places, may be the employment of emetics, purgatives, diuretics, or ſudorifics.

MDCLXXXII.

As ſpontaneous vomiting has ſometimes excited an abſorption in hydropic parts, and thereby drawn off the waters lodged in them, it is reaſonable to ſuppoſe that vomiting excited by art may have the ſame effect; and accordingly it has been often practiſed with advantage. The practice, however, requires that the ſtrong antimonial emetics be employed, and that they

they be repeated frequently after ſhort intervals.

MDCLXXXIII.

Patients ſubmit more readily to the uſe of purgatives, than to that of emetics; and indeed they commonly bear the former more eaſily than the latter. At the ſame time, there are no means we can employ to procure a copious evacuation of ſerous fluids with greater certainty than the operation of purgatives; and it is upon theſe accounts that purging is the evacuation which has been moſt frequently, and perhaps with moſt ſucceſs, employed in dropſy. It has been generally found neceſſary to employ purgatives of the more draſtic kind; which are commonly known, and need not be enumerated here. I believe indeed, that the more draſtic purgatives are the moſt effectual for exciting abſorption

forption, as their ftimulus is moft readily communicated to the other parts of the fyftem; but of late an opinion has prevailed, that fome milder purgatives may be employed with advantage. This opinion has prevailed particularly with regard to the cryftals vulgarly called the Cream of Tartar, which in large dofes, frequently repeated, have fometimes anfwered the purpofe of exciting large evacuations both by ftool and urine, and has thereby cured dropfies. This medicine, however, has frequently failed, both in its operation and effects, when the draftic purgatives have been more fuccefsful.

Practitioners have long ago obferved, that, in the employment of purgatives, it is requifite they be repeated after as fhort intervals as the patient can bear; probably for this reafon, that when the purging is not carried to the degree of foon exciting an abforption, the evacuation

tion weakens the ſyſtem, and thereby in-creaſes the afflux of fluids to the hydropic parts.

MDCLXXXIV.

The kidneys afford a natural outlet for a great part of the watery fluids contained in the blood-veſſels; and the increaſing the excretion by the kidneys to a conſiderable degree, is a means as likely as any other of exciting an abſorption in dropſical parts. It is upon this account that diuretic medicines have been always properly employed in the cure of dropſy. The various diuretics that may be employed, are enumerated in every treatiſe of the Materia Medica and of the Practice of Phyſic, and therefore need not be repeated here. It happens, however, unluckily, that none of them are of very certain operation; neither is it well known why they ſometimes

times ſucceed, and why they ſo often fail; nor why one medicine ſhould prove of ſervice when another does not. It has been generally the fault of writers upon the Practice of Phyſic, that they give us inſtances of caſes in which certain medicines have proved very efficacious, but neglect to tell us in how many other inſtances the ſame have failed.

MDCLXXXV.

It deſerves to be particularly obſerved here, that there is hardly any diuretic more certainly powerful than a large quantity of common water taken in by drinking. I have indeed obſerved above, in MDCLVIII. that a large quantity of water, or of watery liquors, taken in by drinking, has ſometimes proved a cauſe of dropſy; and practitioners have been formerly ſo much afraid that watery liquors taken in by

drinking might run off into dropſical places and increaſe the diſeaſe, that they have generally enjoined the abſtaining, as much as poſſible, from ſuch liquors. Nay, it has been further aſſerted, that by avoiding this ſupply of exhalation, and by a total abſtinence from drink, dropſies have been entirely cured. What concluſion is to be drawn from theſe facts is, however, very doubtful. A dropſy ariſing from a large quantity of liquids taken in to the body has been a very rare occurrence; and there are, on the other hand, innumerable inſtances of very large quantities of water having been taken in and running off again very quickly by ſtool and urine, without producing any degree of dropſy. With reſpect to the total abſtinence from drink, it is a practice of the moſt difficult execution; and therefore has been ſo ſeldom practiſed, that we cannot poſſibly know how far it might prove effectual. The practice of gi-

ving

ving drink very ſparingly, has indeed been often employed: but in a hundred inſtances, I have ſeen it carried to a great length without any manifeſt advantage; while, on the contrary, the practice of giving drink very largely has been found not only ſafe, but very often effectual in curing the diſeaſe. The ingenious and learned Dr Millman has, in my opinion, been commendably employed in reſtoring the practice of giving large quantities of watery liquors for the cure of dropſy. Not only from the inſtances he mentions from his own practice, and from that of ſeveral eminent phyſicians in other parts of Europe, but alſo from many inſtances in the records of phyſic, of the good effects of drinking large quantities of mineral waters in the cure of dropſy, I can have no doubt of the practice recommended by Dr Millman being very often extremely proper. I apprehend it to be eſpecially adapted to thoſe

cafes in which the cure is chiefly attempted by diuretics. It is very probable, that thefe medicines can hardly be carried in any quantity to the kidneys without being accompanied with a large portion of water; and the late frequent employment of the cryftals of tartar has often fhown, that the diuretic effects of that medicine are almoft only remarkable when accompanied with a large quantity of water; and that without this, the diuretic effects of the medicine feldom appear. I fhall conclude this fubject with obferving, that as there are fo many cafes of dropfy abfolutely incurable, the practice now under confideration may often fail, yet in moft cafes it may be fafely tried; and if it appear that the water taken in paffes readily by the urinary fecretion, and efpecially that it increafes the urine beyond the quantity of drink taken in, the practice may probably be continued with

great advantage: but, on the contrary, if the urine be not increaſed, or be not even in proportion to the drink taken in, it may be concluded, that the water thrown in runs off by the exhalants, and will augment the diſeaſe.

MDCLXXXVI.

Another ſet of remedies which may be employed for exciting a ſerous excretion, and thereby curing dropſy, is that of ſudorifics. Such remedies, indeed, have been ſometimes employed: but however uſeful they may have been thought, there are few accounts of their having effected a cure; and although I have had ſome examples of their ſucceſs, in moſt inſtances of their trial they have been ineffectual.

Upon this ſubject it is proper to take notice of the ſeveral means that have been propoſed and employed for diſſipating the humi-

humidity of the body; and particularly that of heat externally applied to the surface of it. Of ſuch applications I have had no experience; and their propriety and utility muſt reſt upon the credit of the authors who relate them. I ſhall offer only this conjecture upon the ſubject: That if ſuch meaſures have been truly uſeful, as it has ſeldom been by the drawing out of any ſenſible humidity, it has probably been by their reſtoring the perſpiration, which is ſo often greatly diminiſhed in this diſeaſe; or, perhaps, by changing the ſtate of the ſkin, from the imbibing condition which is alleged to take place, into that of perſpiring.

MDCLXXXVII.

When, by the ſeveral means now mentioned, we ſhall have ſucceeded in evacuating the water of dropſies, there will

then eſpecially be occaſion for our third indication; which is, to reſtore the tone of the ſyſtem, the loſs of which is ſo often the cauſe of the diſeaſe. This indication, indeed, may properly have place from the very firſt appearance of the diſeaſe; and certain meaſures adapted to this purpoſe may, upon ſuch firſt appearance, be employed with advantage. In many caſes of a moderate diſeaſe, I am perſuaded that they may obviate any future increaſe of it.

MDCLXXXVIII.

Thus, upon what is commonly the firſt ſymptom of anaſarca, that is, upon the appearance of what are called Oedematous Swellings of the feet and legs, the three remedies of bandaging, friction, and exercise, have often been uſed with advantage.

MDCLXXXIX.

MDCLXXXIX.

That ſome degree of external compreſſion is ſuited to ſupport the tone of the veſſels, and particularly to prevent the effects of the weight of the blood in dilating thoſe of the lower extremities, muſt be ſufficiently evident; and the giving that compreſſion by a bandage properly applied, has been often uſeful. In applying ſuch a bandage, care is to be taken that the compreſſion may never be greater on the upper than on the lower part of the limb; and this, I think, can hardly ever be ſo certainly avoided, as by employing a properly conſtructed laced ſtocking.

MDCXC.

Friction is another means by which the action of the blood-veſſels may be promo-

 ted,

ted, and thereby the ſtagnation of fluids in their extremities prevented. Accordingly, the uſe of the fleſh-bruſh has often contributed to diſcuſs œdematous ſwellings. It appears to me, that friction, for the purpoſes now mentioned, is more properly employed in the morning, when the ſwelling is very much gone off, than in the evening, when any conſiderable degree of it has already come on. I apprehend alſo, that friction being made from below upwards only, is more uſeful than when made alternately upwards and downwards. It has been common, inſtead of employing the fleſh-bruſh, to make the friction by warm and dry flannels; and this may in ſome caſes be the moſt convenient: but I cannot perceive that the impregnation of theſe flannels with certain dry fumes is of any benefit.

MDCXCI.

MDCXCI.

With reſpect to exerciſe, I muſt obſerve, that although perſons being much in an erect poſture during the day, may ſeem to increaſe the ſwelling which comes on at night; yet as the action of the muſcles has a great ſhare in promoting the motion of the venous blood, ſo I am certain, that as much exerciſe in walking as the patient can eaſily bear, will often prevent that œdematous ſwelling which much ſtanding, and even ſitting, would have brought on.

MDCXCII.

Theſe meaſures, however, although they may be uſeful at the coming on of a dropſy, whoſe cauſes are not very powerful, will be often inſufficient in a more violent diſeaſe; and ſuch therefore will require more powerful remedies. Theſe

are, exercise and tonic medicines; which may be employed both during the course of the disease, and especially after the water has been evacuated.

MDCXCIII.

Exercise is suited to assist in every function of the animal œconomy, particularly to promote perspiration, and thereby prevent the accumulation of watery fluids in the body. I apprehend also, that it may be the most effectual means for preventing the skin from being in an imbibing state; and, as has been hinted above on the subject of Emaciation (MDCVII.), I am persuaded, that a full and large perspiration will always be a means of exciting absorption in every part of the system. Exercise, therefore, promises to be highly useful in dropsy; and any mode of it may be employed that the patient can most conveniently

niently admit of. It ſhould, however, always be as much as he can eaſily bear: and in anaſarca, the ſhare which the exerciſe of muſcles has in promoting the motion of the venous blood, induces me to think that bodily exerciſe, to whatever degree the patient can bear it, will always be the moſt uſeful. From ſome experience alſo, I am perſuaded, that by exerciſe alone, employed early in the diſeaſe, many dropſies may be cured.

MDCXCIV.

Beſides exerciſe, various tonic remedies are properly employed to reſtore the tone of the ſyſtem. The chief of theſe are, chalybeates, the Peruvian bark, and various bitters. Theſe are not only ſuited to reſtore the tone of the ſyſtem in general, but are particularly uſeful in ſtrengthening the organs of digeſtion, which in drop-

ſies

ſies are frequently very much weakened: and for the ſame purpoſe alſo aromatics may be frequently joined with the tonics.

MDCXCV.

Cold bathing is upon many occaſions the moſt powerful tonic we can employ; but at the beginning of dropſy, when the debility of the ſyſtem is conſiderable, it can hardly be attempted with ſafety. After, however, the water of dropſies has been very fully evacuated, and the indication is to ſtrengthen the ſyſtem for preventing a relapſe, cold bathing may perhaps have a place. It is, at the ſame time, to be admitted with caution; and can ſcarcely be employed till the ſyſtem has otherwiſe recovered a good deal of vigour. When that indeed has happened, cold bathing may be very uſeful in confirming and completing it.

MDCXCVI.

MDCXCVI.

In perſons recovering from dropſy, while the ſeveral means now mentioned for ſtrengthening the ſyſtem are employed, it will be proper at the ſame time to keep conſtantly in view the ſupport of the watery excretions; and conſequently the keeping up the perſpiration by a great deal of exerciſe, and continuing the full flow of the urinary excretions by the frequent uſe of diuretics.

SECT.

SECT. II.

Of the HYDROTHORAX, *or* DROPSY *of the* BREAST.

MDCXCVII.

THE preternatural collection of ferous fluid in the thorax, to which we give the appellation of *Hydrothorax*, occurs more frequently than has been imagined. Its prefence, however, is not always to be very certainly known; and it often takes place to a confiderable degree before it be difcovered.

MDCXCVIII.

MDCXCVIII.

Thefe collections of watery fluids in the thorax, are found in different fituations. Very often the water is found at the fame time in both facs of the pleura, but frequently in one of them only. Sometimes it is found in the pericardium alone; but for the moft part it only appears there when at the fame time a collection is prefent in one or both cavities of the thorax. In fome inftances, the collection is found to be only in that cellular texture of the lungs which furrounds the bronchiæ, without there being at the fame time any effufion into the cavity of the thorax.

Pretty frequently the water collected confifts chiefly of a great number of hydatides in different fituations; fometimes feemingly floating in the cavity, but frequently connected with and attached to par-

particular parts of the internal ſurface of the pleura.

MDCXCIX.

From the collection of water being thus in various ſituations and circumſtances, ſymptoms ariſe which are different in different caſes; and from thence it becomes often difficult to aſcertain the preſence and nature of the affection. I ſhall, however, endeavour here to point out the moſt common ſymptoms, and eſpecially thoſe of that principal and moſt frequent form of the diſeaſe, when the ſerous fluid is preſent in both ſacs of the pleura, or, as we uſually ſpeak, in both cavities of the thorax.

MDCC.

The diſeaſe frequently comes on with a ſenſe of anxiety about the lower part of the ſternum. This, before it has ſubſiſt-

ed long, comes to be joined with some difficulty of breathing; which at firſt appears only upon the perſon's moving a little faſter than uſual, upon his walking up an acclivity, or upon his aſcending a ſtair-caſe: but after ſome time, this difficulty of breathing becomes more conſtant and conſiderable, eſpecially during the night, when the body is in a horizontal ſituation. Commonly, at the ſame time, lying upon one ſide is more eaſy than upon the other, or perhaps lying upon the back more eaſy than upon either ſide. Theſe circumſtances are uſually attended with a frequent cough, that is at firſt dry; but which, after ſome time, is accompanied with an expectoration of thin mucus.

With all theſe ſymptoms, the hydrothorax is not certainly diſcovered, as the ſame ſymptoms often attend other diſeaſes of the breaſt. When, however, along with theſe ſymptoms, there is at the ſame

ſame time an œdematous ſwelling of the feet and legs, a leucophlegmatic paleneſs of the face, and a ſcarcity of urine, the exiſtence of a hydrothorax can be no longer doubtful. Some writers have told us, that ſometimes in this diſeaſe, before the ſwelling of the feet comes on, a watery ſwelling of the ſcrotum appears; but I have never met with any inſtance of this.

MDCCI.

Whilſt the preſence of the diſeaſe is ſomewhat uncertain, there is a ſymptom which ſometimes takes place, and has been thought to be a certain characteriſtic of it; and that is, when, ſoon after the patient has fallen aſleep, he is ſuddenly awaked with a ſenſe of anxiety and difficult breathing, and with a violent palpitation of the heart. Theſe feelings immediately require an erect poſture; and very often the difficulty of

breathing continues to require and to prevent ſleep for a great part of the night. This ſymptom I have frequently found attending the diſeaſe; but I have alſo met with ſeveral inſtances in which this ſymptom did not appear. I muſt remark further, that I have not found this ſymptom attending the empyema, or any other diſeaſe of the thorax; and therefore, when it attends a difficulty of breathing, accompanied with any the ſmalleſt ſymptom of dropſy, I have had no doubt in concluding the preſence of water in the cheſt, and have always had my judgment confirmed by the ſymptoms which afterwards appeared.

MDCCII.

The hydrothorax often occurs with very few, or almoſt none, of the ſymptoms above mentioned; and is not, therefore, very certainly diſcovered till ſome others

others appear. The most decisive symptom is a fluctuation of water in the chest, perceived by the patient himself, or by the physician, upon certain motions of the body. How far the method proposed by Auenbrugger will apply to ascertain the presence of water and the quantity of it in the chest, I have not had occasion or opportunity to observe.

It has been said, that in this disease some tumour appears upon the sides or upon the back; but I have not met with any instance of this. In one instance of the disease, I found one side of the thorax considerably enlarged, the ribs standing out farther on that side than upon the other.

A numbness and a degree of palsy in one or both arms, has been frequently observed to attend a hydrothorax.

Soon after this disease has made some progress, the pulse commonly becomes irregular, and frequently intermitting: but

this

this happens in ſo many other diſeaſes of the breaſt, that unleſs when it is attended with ſome other of the above-mentioned ſymptoms it cannot be conſidered as denoting the hydrothorax.

MDCCIII.

This diſeaſe, as other dropſies, is commonly attended with thirſt and a ſcarcity of urine, to be explained in the ſame manner as in the caſe of anaſarca (MDCLXXIII.) The hydrothorax, however, is ſometimes without thirſt, or any other febrile ſymptom; although I believe this happens in the caſe of partial affections only, or when a more general affection is yet but in a ſlight degree. In both caſes, however, and more eſpecially when the diſeaſe is conſiderably advanced, ſome degree of fever is generally preſent: and I apprehend it to be in ſuch caſe, that the perſons affected are more than uſually ſenſible to cold, and

complain of the coldneſs of the air when that is not perceived by other perſons.

MDCCIV.

The hydrothorax ſometimes appears alone, without any other ſpecies of dropſy being preſent at the ſame time: and in this caſe the diſeaſe, for the moſt part, is a partial affection, as being either of one ſide of the thorax only, or being a collection of hydatides in one part of the cheſt. The hydrothorax, however, is very often a part of more univerſal dropſy, and when at the ſame time there is water in all the three principal cavities and in the cellular texture of a great part of the body. I have met with ſeveral inſtances, in which ſuch univerſal dropſy began firſt by an effuſion into the thorax. The hydrothorax, however, more frequently comes on from an anaſarca gradually increaſing; and, as I have ſaid above,

above, the general diathesis seems often to affect the thorax sooner than it does either the head or the abdomen.

MDCCV.

This disease seldom admits of a cure, or even of alleviation, from remedies. It commonly proceeds to give more and more difficulty of breathing, till the action of the lungs be entirely interrupted by the quantity of water effused; and the fatal event frequently happens more suddenly than was expected. In many of the instances of a fatal hydrothorax, I have remarked a spitting of blood to come on several days before the patient died.

MDCCVI.

The cause of hydrothorax is often manifestly one or other of the general causes

of dropſy pointed out above: but what it is that determines theſe general cauſes to act more eſpecially in the thorax, and particularly what it is that produces the partial collections that occur there, I do not find to be eaſily aſcertained.

MDCCVII.

From what has been ſaid above, it will be evident, that the cure of hydrothorax muſt be very much the ſame with that of anaſarca; and when the former is joined with the latter as an effect of the ſame general diatheſis, there can be no doubt of the method of cure being the ſame in both. Even when the hydrothorax is alone, and the diſeaſe partial, from particular cauſes acting in the thorax only, there can hardly be any other meaſures employed, than the general ones propoſed above. There is only one particular meaſure

ſure adapted to the hydrothorax; and that is, the drawing off the accumulated waters by a paracenteſis of the thorax.

MDCCVIII.

To what caſes this operation may be moſt properly adapted, I find it difficult to determine. That it may be executed with ſafety, there is no doubt; and that it has been ſometimes practiſed with ſucceſs, ſeems to be very well vouched. When the diſeaſe depends upon a general hydropic diatheſis, it cannot alone prove a cure, but may give a temporary relief; and when other remedies ſeem to be employed with advantage, the drawing off the water may very much favour a complete cure. I have not, however, been ſo fortunate as to ſee it practiſed with any ſucceſs; and even where it was moſt promiſing,

that is, in cafes of partial affection, my expectations have been difappointed from it.

SECT.

SECT. III.

Of ASCITES, *or* DROPSY *of the* LOWER BELLY.

MDCCIX.

THE name of *Aſcites* is given to every collection of waters cauſing a general ſwelling and diſtention of the lower belly; and ſuch collections are more frequent than thoſe which happen in the thorax.

MDCCX.

The collections in the lower belly, like thoſe of the thorax, are found in different ſitua-

ſituations. Moſt commonly they are in the ſac of the peritonæum, or general cavity of the abdomen: but they often begin by ſacs formed upon, and connected with, one or other of the viſcera; and perhaps the moſt frequent inſtances of this kind occur in the ovaria of females. Sometimes the water of aſcites is found entirely without the peritonæum, and between this and the abdominal muſcles.

MDCCXI.

Theſe collections connected with particular viſcera, and thoſe formed without the peritonæum, form that diſeaſe which authors have termed the *encyſted dropſy* or *hydrops ſaccatus*. Their preciſe ſeat, and even their exiſtence, is very often difficult to be aſcertained. They are generally formed by collections of hydatides.

MDCCXII.

MDCCXII.

In the moſt ordinary caſe, that of abdominal dropſy, the ſwelling at firſt is in ſome meaſure over the whole belly, but generally appears moſt conſiderable in the epigaſtrium. As the diſeaſe, however, advances, the ſwelling becomes more uniform over the whole. The diſtention, and ſenſe of weight, though conſiderable, vary a little according as the poſture of the body is changed; the weight being felt the moſt upon the ſide on which the patient lies, while at the ſame time on the oppoſite ſide the diſtention becomes ſomewhat leſs. In almoſt all the inſtances of aſcites, the fluctuation of the water within, may be perceived by the practitioner's feeling, and ſometimes by his hearing. This perception of fluctuation does not certainly diſtinguiſh the different ſtates of dropſy; but ſerves very well to diſtinguiſh dropſy from tym-

tympanites, from cafes of phyfconia, and from the ftate of pregnancy in women.

MDCCXIII.

An afcites frequently occurs when no other fpecies of dropfy does at the fame time appear; but fometimes the afcites is a part only of univerfal dropfy. In this cafe, it ufually comes on in confequence of an anafarca, gradually increafing; but its being joined with anafarca, does not always denote any general diathefis, as for the moft part an afcites fooner or later occafions œdematous fwellings of the lower extremities. When the collection of water in the abdomen, from whatever caufe, becomes confiderable, it is always attended with a difficulty of breathing: but this fymptom occurs often when, at the fame time, there is no water in the thorax. The afcites is fometimes

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unaccompanied with any fever; but frequently there is more or leſs of fever preſent with it. The diſeaſe is never conſiderable, without being attended with thirſt and a ſcarcity of urine.

MDCCXIV.

In the diagnoſis of aſcites, the greateſt difficulty that occurs, is in diſcerning when the water is in the cavity of the abdomen, or when it is in the different ſtates of encyſted dropſy above mentioned. There is, perhaps, no certain means of aſcertaining this in all caſes; but in many we may attempt to form ſome judgment with regard to it.

When the antecedent circumſtances give ſuſpicion of a general hydropic diatheſis; when at the ſame time ſome degree of dropſy appears in other parts of the body; and when, from its firſt appearance, the ſwelling has been equally over

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the whole belly, we may generally presume that the water is in the cavity of the abdomen. But when an afcites has not been preceded by any remarkably cachectic ftate of the fyftem, and when at its beginning the tumour and tenfion had appeared in one part of the belly more than another, there is reafon to fufpect an encyfted dropfy. Even when the tenfion and tumour of the belly have become general and uniform over the whole; yet if the fyftem of the body in general appear to be little affected; if the patient's ftrength be little impaired; if the appetite continue pretty entire, and the natural fleep be little interrupted; if the menfes in females continue to flow as ufual; if there be yet no anafarca; or, though it may have already taken place, if it be ftill confined to the lower extremities, and there be no leucophlegmatic palenefs or fallow colour in the countenance; if there be no fever,

 nor

nor ſo much thirſt, or ſcarcity of urine, as occur in a more general affection; then, according as more of theſe different circumſtances take place, there will be the ſtronger ground for ſuppoſing the aſcites to be of the encyſted kind.

The chief exception to be made from this as a general rule, will, in my opinion, be when the aſcites may, with much probability, be preſumed to have come on in conſequence of a ſcirrhous liver; which, I apprehend, may occaſion a collection of water in the cavity of the abdomen, while the general ſyſtem of the body may not be otherwiſe much affected.

MDCCXV.

With reſpect to the cure of aſcites when of the encyſted kind, it does not, ſo far as I know, admit of any. When the collection of water is in the abdominal cavity alone, without any other ſpecies of dropſy

dropſy preſent at the ſame time, I apprehend the aſcites will always be of difficult cure; for it may be preſumed to depend upon a ſcirrhoſity of the liver, or other conſiderable affection of the abdominal viſcera, which I conceive to be of very difficult cure, and therefore the aſcites depending upon them. At the ſame time, ſuch caſes may often admit of a temporary relief by the paracenteſis.

MDCCXVI.

When the aſcites is a part of univerſal dropſy, it may, as far as other caſes of that kind can, admit of a cure; and it will be obvious, that ſuch a cure muſt be obtained by the ſame means as above propoſed for the cure of general anaſarca.

It frequently happens, that the aſcites is attended with a diarrhœa; and, in that caſe, does not admit of the uſe of purga-

tives ſo freely as caſes of anaſarca, commonly do. It is therefore often to be treated by diuretics almoſt alone.

The diuretics that may be employed, are chiefly thoſe above mentioned; but in aſcites, a peculiar one has been found out. It is a long-continued gentle friction of the ſkin over the whole of the abdomen, by the fingers dipped in oil. This has ſometimes been uſeful in exciting an increaſed flow of urine; but in moſt of the trials of it which I have known made, it has failed in producing that effect.

MDCCXVII.

The aſcites admits of a particular means for immediately drawing off the collected waters; and that is the well-known operation of the paracenteſis of the abdomen. In what circumſtances of aſcites this operation can moſt properly be pro-

poſed, it is difficult to determine; but, ſo far as I can judge, it muſt be regulated by very much the ſame conſiderations as thoſe above mentioned with regard to the paracenteſis of the thorax.

The manner of performing the paracenteſis of the abdomen, and the precautions to be taken with reſpect to it, are now ſo commonly known, and delivered in ſo many books, that it is altogether unneceſſary for me to offer any directions upon that ſubject here; eſpecially after the full and judicious information and directions given by Mr BELL, in the ſecond volume of his *Syſtem of Surgery*.

CHAP.

CHAP. IV.

OF GENERAL SWELLINGS, ARISING FROM AN INCREASED BULK OF THE WHOLE SUBSTANCE OF PARTICULAR PARTS.

MDCCXVIII.

UPON the ſubjects of this chapter, ſeveral noſological difficulties occur, and particularly with reſpect to admitting the *Phyſconia* into the order of General Swellings. At preſent, however, it is not neceſſary for me to diſcuſs this point, as I am here to omit entirely the conſidera-

tion of Physconia; both because it can seldom admit of any successful practice, and because I cannot deliver any thing useful either with regard to the pathology or practice in such a disease.

MDCCXIX.

The only other genus of disease comprehended under the title of the present chapter, is the Rachitis; and this being both a proper example of the class of *Cachexy*, and of the order of *Intumescentiæ* or General Swellings, I shall offer some observations with regard to it.

Of Rachitis, or Rickets.

MDCCXX.

This disease has been supposed to have appeared only in modern times, and not above

above two hundred years ago. This opinion, notwithſtanding it has been maintained by perſons of the moſt reſpectable aut[illegible]y, appears to me, from many conſiderations, improbable; but it is a point of too little conſequence to detain my readers here. The only application of it which deſerves any notice is, that it has led to a notion of the diſeaſe having ariſen from the lues venerea, which had certainly made its firſt appearance in Europe not very long before the date commonly aſſigned for the appearance of rachitis: but I ſhall hereafter ſhow, that the ſuppoſed connection between the Siphylis and Rachitis is without foundation.

MDCCXXI.

In delivering the hiſtory of the *Rickets*, I muſt, in the firſt place, obſerve, that with reſpect to the antecedents of the diſeaſe, every thing to be found in authors upon this

ſubject, appears to me to reſt upon a very uncertain foundation. In particular, with reſpect to the ſtate of the parents whoſe offspring become affected with [illegible] diſeaſe, I have met with many inſtances of it, in children from ſeemingly healthy parents; and have met likewiſe with many inſtances of children who never became affected with it, although born of parents who, according to the common accounts, ſhould have produced a rickety offspring: ſo that, even making allowance for the uncertainty of fathers, I do not find the general opinion of authors upon this ſubject to be properly ſupported.

MDCCXXII.

The diſeaſe, however, may be juſtly conſidered as proceeding from parents; for it often appears in a great number of the ſame family: and my obſervation leads

me

me to judge, that it originates more frequently from mothers than from fathers. So far as I can refer the diſeaſe of the children to the ſtate of the parents, it has appeared to me moſt commonly to ariſe from ſome weakneſs, and pretty frequently from a ſcrophulous habit, in the mother. To conclude the ſubject, I muſt remark, that in many caſes I have not been able to diſcern the condition of the parents, to which I could refer it.

When nurſes, other than the mothers, have been employed to ſuckle children, it has been ſuppoſed that ſuch nurſes have frequently given occaſion to the diſeaſe: and when nurſes have both produced and have ſuckled children who became rickety, there may be ground to ſuſpect their having occaſioned the diſeaſe in the children of other perſons: but I have had few opportunities of aſcertaining this matter. It has in ſome meaſure appeared

to me, that thoſe nurſes are moſt likely to produce this diſeaſe, who give infants a large quantity of very watery milk, and who continue to ſuckle them longer than the uſual time. Upon the whole, however, I am of opinion, that hired nurſes ſeldom occaſion this diſeaſe, unleſs when a prediſpoſition to it has proceeded from the parents.

MDCCXXIII.

With regard to the other antecedents, which have been uſually enumerated by authors as the remote cauſes of this diſeaſe, I judge the accounts given to be extremely fallacious; and I am very much perſuaded, that the circumſtances in the rearing of children, have leſs effect in producing rickets than has been imagined. It is indeed not unlikely, that ſome of theſe circumſtances mentioned as remote cauſes

may

may favour, while other circumſtances may reſiſt, the coming on of the diſeaſe; but at the ſame time, I doubt if any of the former would produce it where there was no prediſpoſition in the child's original conſtitution. This opinion of the remote cauſes, I have formed from obſerving, that the diſeaſe comes on when none of theſe had been applied; and more frequently that many of them had been applied without occaſioning the diſeaſe. Thus the learned ZEVIANI alleges, that the diſeaſe is produced by an acid from the milk with which a child is fed for the firſt nine months of its life: but almoſt all children are fed with the ſame food, and in which alſo an acid is always produced; while, at the ſame time, not one in a thouſand of the infants ſo fed becomes affected with the rickets. If, therefore, in the infants who become affected with this diſeaſe, a peculiarly noxious acid is produced,

ced, we muſt ſeek for ſome peculiar cauſe of its production, either in the quality of the milk, or in the conſtitution of the child; neither of which, however, Mr Zeviani has explained. I cannot indeed believe that the ordinary acid of milk has any ſhare in producing this diſeaſe, becauſe I have known many inſtances of the acid being produced and occaſioning various diſorders, without, however, its ever producing rickets.

Another of the remote cauſes commonly aſſigned, is the child's being fed with unfermented farinaceous food. But over the whole world children are fed with ſuch farinacea, while the diſeaſe of rickets is a rare occurrence: and I have known many inſtances where children have been fed with a greater than uſual proportion of fermented farinacea, and alſo a greater proportion of animal food, without theſe preventing the diſeaſe. In my apprehenſion, the like ob-

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ſervations might be made with reſpect to moſt of the circumſtances that have been mentioned as the remote cauſes of rickets.

MDCCXXIV.

Having thus offered my opinion concerning the ſuppoſed antecedents of this diſeaſe, I proceed now to mention the phenomena occurring after it has actually come on.

The diſeaſe ſeldom appears before the ninth month, and ſeldom begins after the ſecond year, of a child's age. In the interval between theſe periods, the appearance of the diſeaſe is ſometimes ſooner, ſometimes later; and commonly at firſt the diſeaſe comes on ſlowly. The firſt appearances are a flaccidity of the fleſh, the body at the ſame time becoming leaner, though food be taken in pretty largely. The head appears large with reſpect to the body; with

with the fontanelle, and perhaps the sutures, more open than usual in children of the same age. The head continues to grow larger; in particular, the forehead becoming unusually prominent; and at the same time the neck continues slender, or seems to be more so, in proportion to the head. The dentition is slow, or much later than usual; and those teeth which come out, readily become black, and frequently again fall out. The ribs lose their convexity, and become flattened on the sides; while the sternum is pushed outward, and forms a sort of ridge. At the same time, or perhaps sooner, the epiphyses at the several joints of the limbs become swelled; while the limbs between the joints appear, or perhaps actually become, more slender. The bones seem to be every where flexible, becoming variously distorted; and particularly the spine of the back becoming incurvated in different parts of its

its length. If the child, at the time the diſeaſe comes on, had acquired the power of walking, it becomes daily more feeble in its motions, and more averſe to the exertion of them, loſing at length the power of walking altogether. Whilſt theſe ſymptoms go on increaſing, the abdomen is always full, and preternaturally tumid. The appetite is often good, but the ſtools are generally frequent and looſe. Sometimes the faculties of the mind are impaired, and ſtupidity or fatuity prevails; but commonly a premature ſenſibility appears, and they acquire the faculty of ſpeech ſooner than uſual. At the firſt coming on of the diſeaſe, there is generally no fever attending it; but it ſeldom continues long, till a frequent pulſe, and other febrile ſymptoms, come to be conſtantly preſent. With theſe ſymptoms the diſeaſe proceeds, and continues in ſome inſtances for ſome years; but very often, in the courſe of that

that time, the diſeaſe ceaſes to advance, and the health is entirely eſtabliſhed, except that the diſtorted limbs produced during the diſeaſe continue for the reſt of life. In other caſes, however, the diſeaſe proceeds increaſing till it has affected almoſt every function of the animal œconomy, and at length terminates in death. The variety of ſymptoms which in ſuch caſes appear, it does not ſeem neceſſary to enumerate, as they are not eſſential to the conſtitution of the diſeaſe, but are merely conſequences of the more violent conditions of it. In the bodies of thoſe who have died, various morbid affections have been diſcovered in the internal parts. Moſt of the viſcera of the abdomen have been found to be preternaturally enlarged. The lungs have alſo been found in a morbid ſtate, ſeemingly from ſome inflammation that had come on towards the end of the diſeaſe. The brain has been com-

monly found in a flaccid ſtate, with effuſions of a ſerous fluid into its cavities. Very univerſally the bones have been found very ſoft, and ſo much ſoftened as to be readily cut by a knife. The fluids have been always found in a diſſolved ſtate, and the muſcular parts very ſoft and tender; and the whole of the dead body without any degree of that rigidity which is ſo common in almoſt all others.

MDCCXXV.

From theſe circumſtances of the diſeaſe, it ſeems to conſiſt in a deficiency of that matter which ſhould form the ſolid parts of the body. This eſpecially appears in the faulty ſtate of oſſification, ſeemingly depending upon the deficiency of that matter which ſhould be depoſited in the membranes which are deſtined to become bony, and ſhould give them their due firm-

neſs

neſs and bony hardneſs. It appears that this matter is not ſupplied in due quantity; but that in place of it, a matter fitted to increaſe their bulk, particularly in the epiphyſes, is applied too largely. What this deficiency of matter depends upon, is difficult to be aſcertained. It may be a fault in the organs of digeſtion and aſſimilation, which prevents the fluids in general from being properly prepared; or it may be a fault in the organs of nutrition, which prevents the ſecretion of a proper matter to be applied. With reſpect to the latter, in what it may conſiſt, I am entirely ignorant, and cannot even diſcern that ſuch a condition exiſts: but the former cauſe, both in its nature and exiſtence, is more readily perceived; and it is probable that it has a conſiderable influence in the matter; as in rachitic perſons a thinner ſtate of the blood, both during life and after death, ſo commonly appears. It is this

ſtate of the fluids, or a deficiency of bony matter in them, that I conſider as the proximate cauſe of the diſeaſe; and which again may in ſome meaſure depend upon a general laxity and debility of the moving fibres of the organs that perform the functions of digeſtion and aſſimilation.

MDCCXXVI.

There is, however, ſomething ſtill wanting to explain, Why theſe circumſtances diſcover themſelves at a particular time of life, and hardly ever either before or after a certain period; and as to this I would offer the following conjectures. Nature having intended that human life ſhould proceed in a certain manner, and that certain functions ſhould be exerciſed at a certain period of life only; ſo it has generally provided, that at that period, and not ſooner, the body ſhould be fitted for the ex-

ercise of the functions suited to it. To apply this to our present subject, Nature seems to have intended that children should walk only at twelve months old; and accordingly has provided, that against that age, and no sooner, a matter should be prepared fit to give that firmness to the bones which is necessary to prevent their bending too easily under the weight of the body. Nature, however, is not always steady and exact in executing her own purposes; and if therefore the preparation of bony matter shall not have been made against the time there is particular occasion for it, the disease of rickets, that is, of soft and flexible bones, must come on; and will discover itself about the particular period we have mentioned. Further, it will be equally probable, that if at the period mentioned the bones shall have acquired their due firmness, and that nature goes on in preparing and supplying the

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proper bony matter, it may be prefumed, that againſt the time a child is two years old, ſuch a quantity of bony matter will be applied, as to prevent the bones from becoming again ſoft and flexible during the reſt of life; unleſs it happen, as indeed it ſometimes does, that certain cauſes occur to waſh out again the bony matter from the membranes in which it had been depoſited. The account I have now given of the period at which the rickets occur, ſeems to confirm the opinion of its proximate cauſe being a deficiency of bony matter in the fluids of the body.

MDCCXXVII.

It has been frequently ſuppoſed, that a ſiphylitic taint has a ſhare in producing rickets; but ſuch a ſuppoſition is altogether improbable. If our opinion of the rickets

having exiſted in Europe before the ſiphylis was brought into it, be well founded, it will then be certain that the diſeaſe may be occaſioned without any ſiphylitic acrimony having a ſhare in its production. But further, when a ſiphylitic acrimony is tranſmitted from the parent to the offspring, the ſymptoms do not appear at a particular time of life only, and commonly more early than the period of rickets; the ſymptoms alſo are very different from thoſe of rickets, and unaccompanied with any appearance of the latter; and, laſtly, the ſymptoms of ſiphylis are cured by means which, in the caſe of rickets, have either no effect, or a bad one. It may indeed poſſibly happen, that ſiphylis and rickets may appear in the ſame perſon; but it is to be conſidered as an accidental complication: and the very few inſtances of it that have occurred, are by no means ſufficient to eſtabliſh any

any neceſſary connection between the two diſeaſes.

MDCCXXVIII.

With reſpect to the deficiency of bony matter, which I conſider as the proximate cauſe of rickets, ſome further conjectures might be offered concerning its remote cauſes: but none of them appear to me very ſatisfying; and whatever they might be, it appears to me they muſt again be reſolved into the ſuppoſition of a general laxity and debility of the ſyſtem.

MDCCXXIX.

It is upon this ſuppoſition almoſt alone that the cure of rickets has entirely proceeded. The remedies have been ſuch eſpecially as were ſuited to improve the tone of the ſyſtem in general, or of the

ſtomach in particular: and we know that the latter are not only ſuited to improve the tone of the ſtomach itſelf, but by that means to improve alſo the tone of the whole ſyſtem.

MDCCXXX.

Of tonic remedies, one of the moſt promiſing ſeems to have been cold bathing; and I have found it the moſt powerful in preventing the diſeaſe. For a long time paſt, it has been the practice in this country, with people of all ranks, to waſh their children from the time of their birth with cold water; and from the time that children are a month old, it has been the practice with people of better rank to have them dipped entirely in cold water every morning: and wherever this practice has been purſued, I have not met with any inſtance of rickets. Amongſt our common people,

people, although they waſh their children with cold water only, yet they do not ſo commonly practiſe immerſion: and when amongſt theſe I meet with inſtances of rickets, I preſcribe cold bathing; which accordingly has often checked the progreſs of the diſeaſe, and ſometimes ſeems to have cured it entirely.

MDCCXXXI.

The remedy of *Ens Veneris*, recommended by Mr Boyle, and ſince his time very univerſally employed, is to be conſidered as entirely a tonic remedy. That or ſome other preparation of iron I have almoſt conſtantly employed, though not indeed always with ſucceſs. I have been perſuaded, that the ens veneris of Mr Boyle, notwithſtanding his giving it this appellation, was truly a preparation of iron, and no other than what we now name the *Flores*

Martiales: but it appears, that both Benevoli and Buchner have employed a preparation of copper; and I am ready to believe it to be a more powerful tonic than the preparations of iron.

MDCCXXXII.

Upon the ſuppoſition of tonic remedies being proper in this diſeaſe, I have endeavoured to employ the Peruvian bark: but from the difficulty of adminiſtering it to infants in any uſeful quantity, I have not been able to diſcover its efficacy; but I am very ready to believe the teſtimony of De Haen upon this ſubject.

MDCCXXXIII.

Exerciſe, which is one of the moſt powerful tonics, has been properly recommended for the cure of rickets; and as the exer-

ciſe

cise of gestation only can be employed, it should always be, with the child laid in a horizontal situation; as the carrying them, or moving them in any degree of an erect posture, is very apt to occasion some distortion. It is extremely probable, that, in this disease, friction with dry flannels may be found an useful remedy.

MDCCXXXIV.

It is also sufficiently probable, that the avoiding of moisture is not only adviseable, but may likewise be of service in the cure of this disease.

There is no doubt that a certain diet may contribute to the same end; but what may be the most eligible, I dare not determine. I have no doubt that leavened bread may be more proper than unfermented farinacea; but I cannot find any reason to believe that strong beer can ever be a proper remedy.

Prac-

Practitioners have been divided in opinion concerning the uſe of milk in this diſeaſe. Zeviani, perhaps from theory, condemns the uſe of it; but Benevoli employed it without its impeding the cure of the diſeaſe. This laſt I have often remarked in the courſe of my own practice. As it is difficult to feed children entirely without milk; ſo I have commonly admitted it as a part of the diet of rickety children; and in many inſtances I can affirm, that it did not prevent the cure of the diſeaſe. In caſes, however, of any appearance of rickets, and particularly of a ſlow dentition, I have diſſuaded the continuance of a child upon the breaſt; becauſe the milk of women is a more watery nouriſhment than that of cows: and I have eſpecially diſſuaded the continuing a child upon the breaſt, when I thought the nurſe gave rather too much of ſuch a watery nouriſhment; for, as has been above mentioned, I have had frequent occaſion to

ſuſpect,

ſuſpect, that the milk of ſuch nurſes has a tendency to favour the coming on of rickets.

MDCCXXXV.

Beſides the remedies and regimen now mentioned, practitioners have commonly employed in this diſeaſe, both emetics and purgatives. When the appetite and digeſtion are conſiderably impaired, vomiting, if neither violent, nor frequently repeated, ſeems to be of ſervice; and by a moderate agitation of the abdominal viſcera, may in ſome meaſure obviate the ſtagnation and conſequent ſwelling that uſually occur in them.

As the tumid ſtate of the abdomen, ſo conſtantly to be met with in this diſeaſe, ſeems to depend very much upon a tympanitic affection of the inteſtines; ſo, both by obviating this, and by deriving from the abdominal viſcera, frequent gentle purga-

purgatives may be of ſervice. Zeviani, perhaps properly, recommends in particular rhubarb; which, beſides its purgative quality, has thoſe alſo of bitter and aſtringent.

MDCCXXXVI.

I have now mentioned moſt of the remedies commonly employed by the practitioners of former times; but I muſt not omit mentioning ſome others that have been lately ſuggeſted. The late Mr De Haen recommends the teſtacea; and aſſures us of their having been employed with ſucceſs: but in the few trials which I have had occaſion to make, their good effects did not appear.

The late Baron Van Swieten gives us one inſtance of rickets cured by the uſe of hemlock; but I do not know that the practice has been repeated.

BOOK

BOOK III.

OF THE

IMPETIGINIS;

OR

DEPRAVED HABIT, WITH AFFECTIONS OF THE SKIN.

MDCCXXXVII.

I FIND it difficult to give any ſufficiently correct and proper character of this order. The diſeaſes comprehended under

der it, depend, for the most part, upon a depraved state of the whole of the fluids, producing tumours, eruptions, or other preternatural affections of the skin. Although it be extremely difficult to find a general character of the order that will apply to each of the genera and species, I shall here treat of the principal genera which have been commonly comprehended under this order, and which I have enumerated in my Nosology.

CHAP.

CHAP. I.

Of Scrophula, or the King's Evil.

MDCCXXXVIII.

THE character of this diſeaſe I have attempted in my Noſology: but it will be more properly taken from the whole of its hiſtory, now to be delivered.

MDCCXXXIX.

It is commonly, and very generally, a hereditary diſeaſe; and although it ſometimes

times may, yet it rarely appears, but in children whoſe parents had at ſome period of their lives been affected with it. Whether it may not fail to appear in the children of ſcrophulous parents, and diſcover itſelf afterwards in their offspring in the ſucceeding generation, I cannot certainly determine; but believe that this has frequently happened. It appears to me to be derived more commonly from fathers than from mothers; but whether this happens from there being more ſcrophulous men than ſcrophulous women married, I am not certain.

With reſpect to the influence of parents in producing this diſeaſe, it deſerves to be remarked, that in a family of many children, when one of the parents has been affected with ſcrophula, and the other not; as it is uſual for ſome of the children to be in conſtitution pretty exactly like the one parent, and others of them like the other;

other; it commonly happens that thoſe children who moſt reſemble the ſcrophulous parent become affected with ſcrophula, while thoſe reſembling the other parent entirely eſcape.

MDCCXL.

The ſcrophula generally appears at a particular period of life. It ſeldom appears in the firſt, or even in the ſecond, year of a child's life; and moſt commonly it occurs from the ſecond, or, as ſome allege, and perhaps more properly, from the third, to the ſeventh year. Frequently, however, it diſcovers itſelf at a later period; and there are inſtances of its firſt appearance, at every period till the age of puberty; after which, however, the firſt appearance of it is very rare.

MDCCXLI.

When it does not occur very early, we can generally diſtinguiſh the habit of body peculiarly diſpoſed to it. It moſt commonly affects children of ſoft and flaccid habits, of fair hair and blue eyes; or at leaſt affects thoſe much more frequently than thoſe of an oppoſite complexion. It affects eſpecially children of ſmooth ſkins and roſy cheeks; and ſuch children have frequently a tumid upper lip, with a chop in the middle of it; and this tumour is often conſiderable, and extended to the columna naſi and lower part of the noſtrils. The diſeaſe is ſometimes joined with, or follows rickets; and although it frequently appears in children who have not had rickets in any great degree, yet it often attacks thoſe who by a protuberant forehead, by tumid joints, and a tumid abdomen, ſhow that they had ſome ra-

rachitic difpofition. In parents who, without having had the difeafe themfelves, feem to produce fcrophulous children, we can commonly perceive much of the fame habit and conftitution that has been juft now defcribed.

Some authors have fuppofed that the fmall-pox has a tendency to produce this difeafe; and Mr De Haen afferts its following the inoculated, more frequently than the natural, fmall-pox. This laft pofition, however, we can confidently affirm to be a miftake; although it muft be allowed, that in fact the fcrophula does often come on immediately after the fmall-pox. It is, however, difficult to find any connection between the two difeafes. According to my obfervation, the accident only happens in children who have pretty manifeftly the fcrophulous difpofition; and I have had feveral inftances of the natural fmall-pox coming upon children affected at the fame

 time

time with ſcrophula, not only without this diſeaſe being any ways aggravated by the ſmall-pox, but even of its being for ſome time after much relieved.

MDCCXLII.

The ſcrophula generally ſhows itſelf firſt at a particular ſeaſon of the year; and at ſome time between the winter and ſummer ſolſtice; but commonly long before the latter period. It is to be obſerved further, that the courſe of the diſeaſe is uſually connected with the courſe of the ſeaſons. Whilſt the tumours and ulcerations peculiar to this diſeaſe, appear firſt in the ſpring, the ulcers are frequently healed up in the courſe of the ſucceeding ſummer, and do not break out again till the enſuing ſpring, to follow again with the ſeaſon the ſame courſe as before.

MDCCXLIII.

MDCCXLIII.

Frequently the firſt appearance of the diſeaſe is the tumid and chopped lip above mentioned. Upon other occaſions the firſt appearance is that of ſmall ſpherical or oval tumours, moveable under the ſkin. They are ſoft, but with ſome elaſticity. They are without pain; and without any change in the colour of the ſkin. In this ſtate they often continue for a long time; even for a year or two, and ſometimes longer. Moſt commonly they firſt appear upon the ſides of the neck below the ears; but ſometimes alſo under the chin. In either caſe, they are ſuppoſed to affect in theſe places the conglobate or lymphatic glands only; and not at all the ſalivary glands, till the diſeaſe is very greatly advanced. The diſeaſe frequently affects, and even at firſt appears in, other parts of the body. In particular, it affects the joints of the el-

bows and ankles, or thoſe of the fingers and toes. The appearances about the joints are not commonly, as elſewhere, ſmall moveable ſwellings; but a tumour almoſt uniformly ſurrounding the joint, and interrupting its motion.

MDCCXLIV.

Theſe tumours, as I have ſaid, remain for ſome time little changed; and, from the time they firſt appeared in the ſpring, they often continue in this way till the return of the ſame ſeaſon in the next, or perhaps the ſecond year after. About that time, however, or perhaps in the courſe of the ſeaſon in which they firſt appear, the tumour becomes larger and more fixed; the ſkin upon it acquires a purple, ſeldom a clear redneſs: but growing redder by degrees, the tumour becomes ſofter, and allows the fluctuation of a liquid

within

within to be perceived. All this proceſs, however, takes place with very little pain attending it. At length ſome part of the ſkin becomes paler; and by one or more ſmall apertures a liquid is poured out.

MDCCXLV.

The matter poured out has at firſt the appearance of pus, but it is uſually of a thinner kind than that from phlegmonic abſceſſes; and the matter as it continues to be diſcharged, becomes daily leſs purulent, and appears more and more a viſcid ſerum, intermixed with ſmall pieces of a white ſubſtance reſembling the curd of milk. By degrees the tumour almoſt entirely ſubſides, while the ulcer opens more, and ſpreads broader; unequally, however, in different directions, and therefore is without any regular circumſcription. The edges of the ulcer are commonly flat and ſmooth,

both on their outſide and their inner edge, which ſeldom puts on a callous appearance. The ulcers, however, do not generally ſpread much, or become deeper; but at the ſame time their edges do not advance, or put on any appearance of forming a cicatrix.

MDCCXLVI.

In this condition the ulcers often continue for a long time; while new tumours, with ulcers ſucceeding them in the manner above deſcribed, make their appearance in different parts of the body. Of the firſt ulcers, however, ſome heal up, while other tumours and ulcers appear in their vicinity, or in other parts of the body: and in this manner the diſeaſe proceeds, ſome of the ulcers healing up, at leaſt to a certain degree, in the courſe of ſummer, and breaking out again in the ſucceeding ſpring: or it continues,

nues, by new tumours and ulcers ſucceeding them, in the ſpring ſeaſon, making their appearance ſucceſſively for ſeveral years.

MDCCXLVII.

In this way the diſeaſe goes on for ſeveral years; but very commonly in four or five years it is ſpontaneouſly cured, the former ulcers being healed up, and no new tumours appearing: and thus at length the diſeaſe ceaſes entirely, leaving only ſome indelible eſchars, pale and ſmooth, but in ſome parts ſhrivelled; or, where it had occupied the joints, leaving the motion of theſe impaired, or entirely deſtroyed.

MDCCXLVIII.

Such is the moſt favourable courſe of this diſeaſe; and with us, it is more frequently

quently ſuch, than otherwiſe: but it is often a more violent, and ſometimes a fatal malady. In theſe caſes, more parts of the body are at the ſame time affected; the ulcers alſo ſeeming to be imbued with a peculiarly ſharp acrimony, and therefore becoming more deep, eroding, ſpreading, as well as ſeldomer healing up. In ſuch caſes, the eyes are often particularly affected. The edges of the eye-lids are affected with tumour and ſuperficial ulcerations; and theſe commonly excite obſtinate inflammation in the adnata, which frequently produces an opacity of the cornea.

When the ſcrophula eſpecially affects the joints, it ſometimes produces there conſiderable tumours; in the abſceſſes following which, the ligaments and cartilages are eroded, and the adjoining bones are affected with a caries of a peculiar kind. In theſe caſes, alſo, of more violent ſcrophula, while every year produces a number

ber of new tumours and ulcers, their acrimony ſeems at length to taint the whole fluids of the body, occaſioning various diſorders; and particularly a hectic fever, with all its ſymptoms, which at length proves fatal, with ſometimes the ſymptoms of a phthiſis pulmonalis.

MDCCXLIX.

The bodies of perſons who have died of this diſeaſe ſhow many of the viſcera in a very morbid ſtate; and particularly moſt of the glands of the meſentery very much tumefied, and frequently in an ulcerated ſtate. Commonly alſo a great number of tubercles or cyſts, containing matter of various kinds, appear in the lungs.

MDCCL.

MDCCL.

Such is the hiſtory of the diſeaſe; and from thence it may appear, that the nature of it is not eaſily to be aſcertained. It ſeems to be a peculiar affection of the lymphatic ſyſtem; and this in ſome meaſure accounts for its connection with a particular period of life. Probably, however, there is a peculiar acrimony of the fluids that is the proximate cauſe of the diſeaſe; altho' of what nature this is, has not yet been diſcovered. It may perhaps be generally diffuſed in the ſyſtem, and exhaled into the ſeveral cavities and cellular texture of the body; and therefore, being taken up by the abſorbents, may diſcover itſelf eſpecially in the lymphatic ſyſtem. This, however, will hardly account for its being more confined to that ſyſtem, than happens in the caſe of many other acrimonies which may be ſuppoſed to be as generally diffuſed.

In

In ſhort, its appearance in particular con-ſtitutions, and at a particular period of life, and even its being a hereditary diſeaſe, which ſo frequently depends upon the tranſmiſſion of a peculiar conſtitution, are all of them circumſtances which lead me to conclude, upon the whole, that this diſ-eaſe depends upon a *peculiar conſtitution of the lymphatic ſyſtem.*

MDCCLI.

It ſeems proper to obſerve here, that the ſcrophula does not appear to be a conta-gious diſeaſe; at leaſt I have known many inſtances of ſound children having had frequent and cloſe intercourſe with ſcro-phulous children without being infected with the diſeaſe. This certainly ſhows, that in this diſeaſe the peculiar acrimony of it is not exhaled from the ſurface of the body; but that it depends eſpecially upon a peculiar conſtitution of the ſyſtem.

MDCCLII.

MDCCLII.

Several authors have ſuppoſed the ſcrophula to have been derived from the venereal diſeaſe; but upon no juſt grounds that I can perceive. In very many inſtances, there can hardly be any ſuſpicion of the parents producing this diſeaſe having been imbued with ſiphylis, or with any ſiphylitic taint; and I have known ſeveral examples of parents conveying ſiphylis to their offspring, in whom, however, no ſcrophulous ſymptoms at any time afterwards appeared. Further, the ſymptoms of the two diſeaſes are very different; and the difference of their natures appears particularly from hence, that while mercury commonly and readily cures the ſiphylis, it does no ſervice in ſcrophula, and very often rather aggravates the diſeaſe.

MDCCLIII.

MDCCLIII.

For the cure of ſcrophula, we have not yet learned any practice that is certainly or even generally ſucceſsful.

The remedy which ſeems to be the moſt ſucceſsful, and which our practitioners eſpecially truſt to and employ, is the uſe of mineral waters; and indeed the waſhing out, by means of theſe, the lymphatic ſyſtem, would ſeem to be a meaſure promiſing ſucceſs: but in very many inſtances of the uſe of theſe waters, I have not been well ſatisfied that they had ſhortened the duration of the diſeaſe more than had often happened when no ſuch remedy had been employed.

MDCCLIV.

With regard to the choice of the mineral waters moſt fit for the purpoſe, I cannot with any confidence give an opinion.

Almoſt all kinds of mineral waters, whether chalybeate, ſulphureous, or ſaline, have been employed for the cure of ſcrophula, and ſeemingly with equal ſucceſs and reputation: a circumſtance which leads me to think, that, if they are ever ſucceſsful, it is the elementary water that is the chief part of the remedy.

Of late, ſea-water has been eſpecially recommended and employed; but after numerous trials, I cannot yet diſcover its ſuperior efficacy.

MDCCLV.

The other remedies propoſed by practical writers are very numerous; but, upon that very account, I apprehend they are little to be truſted; and as I cannot perceive any juſt reaſon for expecting ſucceſs from them, I have very ſeldom employed them.

Of late, the Peruvian bark has been much

much recommended: and as in ſcrophulous perſons there are generally ſome marks of laxity and flaccidity, this tonic may poſſibly be of ſervice; but in a great variety of trials, I have never ſeen it produce any immediate cure of the diſeaſe.

In ſeveral inſtances, the leaves of colts-foot have appeared to me to be ſucceſsful. I have uſed it frequently in a ſtrong decoction, and even then with advantage; but have found more benefit from the expreſſed juice, when the plant could be had in ſomewhat of a ſucculent ſtate, ſoon after its firſt appearance in the ſpring.

MDCCLVI.

I have alſo frequently employed the hemlock, and have ſometimes found it uſeful in diſcuſſing obſtinate ſwellings: but in this, it has alſo often diſappointed me; and

I have not at any time obſerved that it diſpoſed ſcrophulous ulcers to heal.

I cannot conclude the ſubject of internal medicines without remarking, that I have never found, either mercury or antimony, in any ſhape, of uſe in this diſeaſe; and when any degree of a feveriſh ſtate had come on, the uſe of mercury proved manifeſtly hurtful.

MDCCLVII.

In the progreſs of ſcrophula, ſeveral external medicines are requiſite. Several applications have been uſed for diſcuſſing the tumours upon their firſt coming on; but hitherto my own practice, in theſe reſpects, has been attended with very little ſucceſs. The ſolution of ſaccharum ſaturni has ſeemed to be uſeful; but it has more frequently failed: and I have had no better ſucceſs with the ſpiritus

ritus Mindereri. Fomentations of every kind have been frequently found to do harm; and poultices ſeem only to hurry on a ſuppuration. I am doubtful if this laſt be ever practiſed with advantage; for ſcrophulous tumours ſometimes ſpontaneouſly diſappear, but never after any degree of inflammation has come upon them; and therefore poultices, which commonly induce inflammation, prevent that diſcuſſion of tumours, which might otherwiſe have happened.

Even when ſcrophulous tumours have advanced towards ſuppuration, I am unwilling to haſten the ſpontaneous opening, or to make it by the lancet, ; becauſe I apprehend the ſcrophulous matter is liable to be rendered more acrid by communication with the air, and to become more eroding and ſpreading than when in its incloſed ſtate.

MDCCLVIII.

The management of ſcrophulous ulcers has, ſo far as I know, been as little ſucceſsful as that of the tumours. Eſcharotic preparations, of either mercury or copper, have been ſometimes uſeful in bringing on a proper ſuppuration, and thereby diſpoſing the ulcer to heal; but they have ſeldom ſucceeded, and more commonly they have cauſed the ulcer to ſpread more. The eſcharotic from which I have received moſt benefit is burnt alum; and a portion of that mixed with a mild ointment, has been as uſeful an application as any I have tried. The application, however, that I have found moſt ſerviceable, and very univerſally admiſſible, is that of linen cloths wetted with cold water, and frequently changed when they are becoming dry, it being inconvenient to let them be glued to the ſore. They are therefore to

be

be changed frequently during the day; and a cloth ſpread with a mild ointment or plaſter may be applied for the night. In this practice I have ſometimes employed ſea-water: but generally it proved too irritating; and neither that nor any mineral water has appeared to be of more ſervice than common water.

MDCCLIX.

To conclude what I have to offer upon the cure of ſcrophula, I muſt obſerve, that cold bathing ſeems to have been of more benefit than any other remedy that I have had occaſion to ſee employed.

CHAP. II.

OF SIPHYLIS, OR THE VENEREAL DISEASE.

MDCCLX.

AFTER practitioners have had ſo much experience in treating this diſeaſe, and after ſo many books have been publiſhed upon the ſubject, it does not ſeem neceſſary, or even proper, for me to attempt any full treatiſe concerning it; and I ſhall therefore confine myſelf to ſuch general remarks, as may ſerve to illuſtrate ſome parts of the pathology or of the practice.

MD CLXI.

MDCCLXI.

It is ſufficienly probable, that, anciently, in certain parts of Aſia, where the leproſy prevailed, and in Europe after that diſeaſe had been introduced into it, a diſeaſe of the genitals, reſembling that which now commonly ariſes from ſiphylis, had frequently appeared: but it is equally probable, that a new diſeaſe, and what we at preſent term *Siphylis*, was firſt brought into Europe about the end of the fifteenth century; and that the diſtemper now ſo frequently occurring, has been very entirely derived from that which was imported from America at the period mentioned.

MDCCLXII.

This diſeaſe, at leaſt in its principal circumſtances, never ariſes in any perſon

but from ſome communication with a perſon already affected with it. It is moſt commonly contracted in conſequence of coition with an infected perſon; but in what manner the infection is communicated, is not clearly explained. I am perſuaded, that in coition, it is communicated without there being any open ulcer either in the perſon communicating or in the perſon receiving the infection; but in all other caſes, I believe it is never communicated in any other way than by a contact of ulcer, either in the perſon communicating or in the perſon receiving the infection.

MDCCLXIII.

As it thus ariſes from the contact of particular parts, ſo it always appears firſt in the neighbourhood of the parts to which the infecting matter had been immediately applied; and therefore, as moſt commonly

ly contracted by coition, it generally appears first in the genitals.

MDCCLXIV.

After its first appearance in particular parts, more especially when these are the genitals of either sex, its effects for some time seem to be confined to these parts; and indeed, in many cases, never extends further. In other cases, however, the infecting matter passes from the parts first affected, and from the genitals therefore, into the blood-vessels; and being there diffused, produces disorders in many other parts of the body.

From this view of the circumstances, physicians have very properly distinguished the different states of the disease, according as they are local or are more universal. To the former, they have adapted appellations suited to the manner in which the disease appears; and to the other the general

ral affection, they have almost totally confined the appellations of *Siphylis*, *Lues Venerea*, or *Pox*. In the remarks I am now to offer, I shall begin with considering the local affection.

MDCCLXV.

This local affection appears chiefly in the form of gonorrhœa or chancre.

The phenomena of gonorrhœa either upon its first coming on or in its after progress, or the symptoms of ardor urinæ, chordee, or others attending it, it is not necessary for me to describe. I shall only here observe, that the chief circumstance to be taken notice of, is the inflamed state of the urethra, which I take to be inseparable from the disease.

MDCCLXVI.

MDCCLXVI.

In theſe well-known circumſtances, the gonorrhœa continues for a time longer or ſhorter, according to the conſtitution of the patient; it uſually remaining longeſt in the moſt vigorous and robuſt, or according to the patient's regimen, and the care taken to relieve or cure the diſeaſe. In many caſes, if by a proper regimen the irritation of the inflamed ſtate is carefully avoided, the gonorrhœa ſpontaneouſly ceaſes, the ſymptoms of inflammation gradually abating, the matter diſcharged becoming of a thicker and more viſcid conſiſtence, as well as of a whiter colour; till at length, the flow of it ceaſes altogether; and whether it be thus cured ſpontaneouſly, or by art, the diſeaſe often exiſts without communicating any infection to the other parts of the body.

MDCCLXVII.

MDCCLXVII.

In other cafes, however, the difeafe having been neglected, or by an improper regimen aggravated, it continues with all its fymptoms for a long time; and produces various other diforders in the genital parts, which, as commonly taken notice of by authors, need not be defcribed here. I fhall only obferve, that the inflammation of the urethra, which at firft feems to be feated chiefly, or only, in its anterior parts, is in fuch neglected and aggravated cafes fpread upwards along the urethra, even to the neck of the bladder. In thefe circumftances, a more confiderable inflammation is occafioned in certain parts of the urethra; and confequently, fuppuration and ulcer are produced, by which the venereal poifon is fometimes communicated to the fyftem, and gives rife to a general fiphylis.

MDCCLXVIII.

MDCCLXVIII.

It was ſome time ago a pretty general ſuppoſition, that the gonorrhœa depended always upon ulcers of the urethra, producing a diſcharge of purulent matter; and ſuch ulcers do indeed ſometimes occur in the manner that has been juſt now mentioned. We are now aſſured, however, from many diſſections of perſons who had died when labouring under a gonorrhœa, that the diſeaſe may exiſt, and from many conſiderations it is probable that it commonly does exiſt, without any ulceration of the urethra; ſo that the diſcharge which appears, is entirely that of a vitiated mucus from the mucous follicles of the urethra.

MDCCLXIX.

Although moſt of the ſymptoms of gonorrhœa ſhould be removed, yet it often happens

happens that a mucous fluid continues to be difcharged from the urethra for a long time after, and fometimes for a great part of a perfon's life. This difcharge is what is commonly called a *Gleet*.

With refpect to this, it is proper to obferve, that in fome cafes, when it is certain that the matter difcharged contains no venereal poifon, the matter may, and often does put on that puriform appearance, and that yellow and greenifh colour, which appears in the difcharge at the beginning and during the courfe of a virulent gonorrhœa. Thefe appearances in the matter of a gleet which before had been of a lefs coloured kind, have frequently given occafion to fuppofe that a frefh infection had been received: but I am certain that fuch appearances may be brought on by, perhaps, various other caufes; and particularly, by intemperance in venery and drinking concurring together. I believe, indeed,

indeed, that this ſeldom happens to any but thoſe who had before frequently laboured under a virulent gonorrhœa, and have more or leſs of gleet remaining with them: but I muſt alſo obſerve, that in perſons who at no period of their life had ever laboured under a virulent gonorrhœa, or any other ſymptom of ſiphylitic affection, I have met with inſtances of diſcharges from the urethra reſembling thoſe of a virulent gonorrhœa.

The purpoſe of theſe obſervations is, to ſuggeſt to practitioners what I have not found them always aware of, that in perſons labouring under a gleet, ſuch a return of the appearances of a virulent gonorrhœa may happen without any new infection having been received, and conſequently not requiring the treatment which a new infection might perhaps demand. When in the cure of gonorrhœa it was the practice to employ purgatives very frequently,

quently, and ſometimes thoſe of the draſtic kind, I have known the gleet, or ſpurious gonorrhœa, by ſuch a practice much increaſed, and long continued, and the patient's conſtitution very much hurt. Nay, in order more certainly further to prevent miſtakes, it is to be obſerved, that the ſpurious gonorrhœa is ſometimes attended with heat of urine, and ſome degree of inflammation; but theſe ſymptoms are ſeldom conſiderable, and, merely by the aſſiſtance of a cool regimen, commonly diſappear in a few days.

MDCCLXX.

With reſpect to the cure of a virulent gonorrhœa, I have only to remark, that if it be true, as I have mentioned above, that the diſeaſe will often, under a proper regimen, be ſpontaneouſly cured; and that the whole of the virulent matter may be thus entirely diſcharged without the

the aſſiſtance of art; it would ſeem that there is nothing required of practitioners, but to moderate and remove that inflammation which continues the diſeaſe, and occaſions all the troubleſome ſymptoms that ever attend it. The ſole buſineſs therefore of our art in the cure of gonorrhœa, is to take off the inflammation accompanying it: and this I think may commonly be done, by avoiding exerciſe, by uſing a low and cool diet, by abſtaining entirely from fermented and ſpirituous liquors, and by taking plentifully of mild diluent drinks.

MDCCLXXI.

The heat of urine, which is ſo troubleſome in this diſeaſe, as it ariſes from the increaſed ſenſibility of the urethra in its inflamed ſtate; ſo, on the other hand, the irritation of the urine has the effect of in-

creaſing the inflammation, and is therefore to be removed as ſoon as poſſible. This can be done moſt effectually by taking in a large quantity of mild watery liquors. Demulcents may be employed; but unleſs they be accompanied with a large quantity of water, they will have little effect. Nitre has been commonly employed as a ſuppoſed refrigerant: but, from much obſervation, I am convinced, that in a ſmall quantity it is uſeleſs, and in a large quantity certainly hurtful; and, for this reaſon, that every ſaline matter paſſing with the urine generally gives ſome irritation to the urethra. To prevent the irritation of the urethra ariſing from its increaſed ſenſibility, the injection of mucilage or of mild oil into it has been practiſed; but I have ſeldom found this of much ſervice.

MDCCLXXII.

MDCCLXXII.

In gonorrhœa, as coſtiveneſs may be hurtful, both by an irritation of the ſyſtem in general, and of the urethra in particular, as this is occaſioned always by the voiding of hardened fæces; ſo coſtiveneſs is to be carefully avoided or removed; and the frequent uſe of large glyſters of water and oil, I have found of remarkable benefit in this diſeaſe. If glyſters, however, do not entirely obviate coſtiveneſs, it will be neceſſary to give laxatives by the mouth: which, however, ſhould be of the mildeſt kind, and ſhould do no more than keep the belly regular and a little looſe, without much purging.

The practice of frequent purging, which was formerly ſo much in uſe, and is not yet entirely laid aſide, has always appeared to me to be generally ſuperfluous, and often very hurtful. Even

what are ſuppoſed to be cooling purgatives, ſuch as Glauber's ſalt, ſoluble tartar, and cryſtals of tartar, in ſo far as any part of them paſs by urine, they, in the ſame manner as we have ſaid of nitre, may be hurtful; and ſo far as they produce very liquid ſtools, the matter of which is generally acrid, they irritate the rectum, and conſequently the urethra. This laſt effect, however, the acrid, and in any degree draſtic purgatives, more certainly produce.

MDCCLXXIII.

In caſes of a gonorrhœa attended with violent inflammation, blood-letting may be of ſervice; and in the caſe of perſons of a robuſt and vigorous habit, in whom the diſeaſe is commonly the moſt violent, blood-letting may be very properly employed. As general bleedings, however, when

when there is no phlogiſtic diatheſis in the ſyſtem, have little effect in removing topical inflammation; ſo in gonorrhœa, when the inflammation is conſiderable, topical bleeding applied to the urethra by leeches, is generally more effectual in relieving the inflammation.

MDCCLXXIV.

When there is any phymoſis attending a gonorrhœa, emollient fomentations applied to the whole penis are often of ſervice. In ſuch caſes it is neceſſary, and in all others uſeful, to keep the penis laid up to the belly, when the patient either walks about or is ſitting.

MDCCLXXV.

Upon occaſion of frequent priapiſm and chordee, it has been found uſeful to ap-

ply to the whole of the penis a poultice of crumb of bread moiſtened with a ſtrong ſolution of ſugar of lead. I have, however, been often diſappointed in this practice, perhaps by the poultice keeping the penis too warm, and thereby exciting the very ſymptoms I wiſhed to prevent. Whether lotions of the external urethra with a ſolution of the ſugar of lead, might be uſeful in this caſe, I have not properly tried.

MDCCLXXVI.

With reſpect to the uſe of injections, ſo frequently employed in gonorrhœa, I am perſuaded, that the early uſe of aſtringent injections is pernicious; not by occaſioning a ſiphylis, as has been commonly imagined; but by increaſing and giving occaſion to all the conſequences of the inflammation, particularly to the very troubleſome

ſome ſymptoms of ſwelled teſticles. When, however, the diſeaſe has continued for ſome time, and the inflammatory ſymptoms have very much abated, I am of opinion, that by injections of moderate aſtringency, or at leaſt of this gradually increaſed, an end may be ſooner put to the diſeaſe than would otherwiſe have happened; and that a gleet, ſo readily occurring, may be generally prevented.

MDCCLXXVII.

Beſides the uſe of aſtringent injections, it has been common enough to employ thoſe of a mercurial kind. With reſpect to theſe, although I am convinced that the infection producing gonorrhœa, and that producing chancres and ſiphylis, are one and the ſame; yet I apprehend, that in gonorrhœa mercury cannot be of uſe by correcting the virulence of the infec-

tion; and therefore that it is not universally neceſſary in this diſeaſe. I am perſuaded, however, that mercury applied to the internal ſurface of the urethra, may be of uſe in promoting the more full and free diſcharge of virulent matter from the mucous glands of it. Upon this ſuppoſition, I have frequently employed mercurial injections; and, as I judge, with advantage; thoſe injections often bringing on ſuch a ſtate of the conſiſtence and colour of the matter diſcharged, as we know uſually to precede its ſpontaneous ceaſing. I avoid theſe injections, however, in recent caſes, or while much inflammation is ſtill preſent; but when that inflammation has ſomewhat abated, and the diſcharge notwithſtanding ſtill continues in a virulent form, I employ mercurial injections freely. I employ thoſe only that contain mercury entirely in a liquid form, and avoid thoſe

which

which may depoſite an acrid powder in the urethra. That which I have found moſt uſeful is a ſolution of the corroſive ſublimate in water; ſo much diluted as not to occaſion any violent ſmarting, but not ſo much diluted as to give no ſmarting at all. It is ſcarce neceſſary to add, that when there is reaſon to ſuſpect there are ulcerations already formed in the urethra, mercurial injections are not only proper, but the only effectual remedy that can be employed.

MDCCLXXVIII.

With regard to the cure of gonorrhœa, I have only one other remark to offer. As moſt of the ſymptoms ariſe from the irritation of a ſtimulus applied, the effects of this irritation may be often leſſened by diminiſhing the irritability of the ſyſtem; and it is well known, that the moſt certain means of accompliſhing this is by employ-

ing

ing opium. For that reaſon, I conſider the practice both of applying opium directly to the urethra, and of exhibiting it by the mouth, to be extremely uſeful in moſt caſes of gonorrhœa.

MDCCLXXIX.

After thus offering ſome remarks with reſpect to gonorrhœa in general, I might proceed to conſider particularly the various ſymptoms which ſo frequently attend it; but it does not ſeem neceſſary for me to attempt this after the late publications of Dr Foart Simmons, and of Dr Schwediauer, who have treated the ſubject ſo fully, and with ſo much diſcernment and ſkill.

MDCCLXXX.

The other form of the local affection of

ſiphylis,

ſiphylis, is that of chancre. The ordinary appearance of this I need not deſcribe, it having been already ſo often done. Of the few remarks I have to offer, the firſt is, that I believe chancres never appear in any degree without immediately communicating to the blood more or leſs of the venereal poiſon: for I have conſtantly, whenever chancres had appeared, found, that unleſs mercury was immediately given internally, ſome ſymptoms of a general ſiphylis did certainly come on afterwards; and though the internal uſe of mercury ſhould prevent any ſuch appearance, it is ſtill to be preſumed that the poiſon had been communicated, becauſe mercury could act upon it in no other manner than as diffuſed in the fluids.

MDCCLXXXI.

It has been a queſtion among practitioners,

tioners, upon the ſubject of chancres, Whether they may be immediately healed up by applications made to the chancres, or if they ſhould be left open for ſome time without any ſuch application? It has been ſuppoſed, that the ſudden healing up of chancres might immediately force into the blood a poiſon, which might have been excluded by being diſcharged from the chancre. This, however, is a ſuppoſition that is very doubtful; and, upon the other hand, I am certain, that the longer a chancre is kept open, the more poiſon it perhaps generates, and certainly ſupplies it more copiouſly to the blood. And although the above-mentioned ſuppoſition were true, it will be of little conſequence, if the internal uſe of mercury, which I judge neceſſary in every caſe of chancre, be immediately employed. I have often ſeen very troubleſome conſequences follow from allowing chancres to remain unhealed; and the ſymp-

ſymptoms of general ſiphylis have always ſeemed to me to be more conſiderable and violent in proportion as chancres had been ſuffered to remain longer unhealed. They ſhould always, therefore, be healed as ſoon as poſſible; and that, by the only very effectual means, the application of mercurials to the chancre itſelf. Thoſe that are recent, and have not yet formed any conſiderable ulcer, may often be healed by the common mercurial ointment; but the moſt powerful means of healing them has appeared to me, to be the application of red precipitate in a dry powder.

MDCCLXXXII.

When, in conſequence of chancres, or of the other circumſtances above mentioned, by which it may happen the venereal poiſon has been communicated to the blood, it produces many different ſymp-

ſymptoms in different parts of the body, not neceſſary to be enumerated and deſcribed here, that having been already done by many authors with great accuracy.

MDCCLXXXIII.

Whenever any of thoſe ſymptoms do in any degree appear, or as ſoon as it is known that the circumſtances which give occaſion to the communication of the venereal poiſon have taken place, I hold the internal uſe of mercury to be immediately neceſſary; and I am well perſuaded, that mercury employed without delay, and in ſufficient quantity, will pretty certainly prevent the ſymptoms which would otherwiſe have ſoon appeared, or will remove thoſe that may have already diſcovered themſelves. In both caſes, it will ſecure the

the perſon from any future conſequences of ſiphylis from that infection.

MDCCLXXXIV.

This advice for the early and full uſe of mercury, I take to be the moſt important that can be given with reſpect to the venereal diſeaſe: And although I muſt admit that the virulence of the poiſon may be greater in one caſe than in another, and even that one conſtitution may be more favourable than another to the violence of the diſeaſe; yet I am thoroughly convinced, that moſt of the inſtances which have occurred of the violence and obſtinacy of ſiphylis have been owing very entirely to the neglect of the early application of mercury.

MDCCLXXXV.

Whatever other remedies of ſiphylis may be

be known, or may hereafter be found out, I cannot pretend to determine; but I am well perſuaded, that in moſt caſes mercury properly employed will prove a very certain and effectual remedy. With reſpect to others that have been propoſed, I ſhall offer this remark only, that I have found the decoction of the mezereon contribute to the healing of ulcers which ſeemed to have reſiſted the power of mercury.

MDCCLXXXVI.

With regard to the many and various preparations of mercury, I do not think it neceſſary to give any enumeration of them here, as they are commonly very well known, and have been lately well enumerated by Dr Schwediauer. The choice of them ſeems to be for the moſt part a matter of indifference; as I believe cures

cures have been, and ſtill may be, effected by many different preparations, if properly adminiſtered. The proper adminiſtration ſeems to conſiſt, *firſt*, In the chooſing thoſe preparations which are the leaſt ready to run off by ſtool; and therefore the applications externally by unction, are in many caſes the moſt convenient. 2*dly*, In employing the unction, or in giving a preparation of mercury internally, in ſuch quantity as may ſhow its ſenſible effects in the mouth. And, 3*dly*, without carrying theſe effects to a greater length, In the continuing the employment of mercury for ſeveral weeks, or till the ſymptoms of the diſeaſe ſhall have for ſome time entirely diſappeared. I ſay nothing of the regimen proper and neceſſary for patients during the employment of mercury, becauſe I preſume it to be very well known.

MDCCLXXXVII.

Amongſt the other preparations of mercury, I believe the corroſive ſublimate has often been employed with advantage: but I believe alſo, that it requires being continued for a longer time than is neceſſary in the employment of other preparations in the manner above propoſed; and I ſuſpect it has often failed in making a cure, becauſe employed while perſons were at the ſame time expoſed to the free air.

MDCCLXXXVIII.

Upon theſe points, and others relative to the adminiſtration of mercury, and the cure of this diſeaſe, I might offer ſome particular remarks: but I believe they are generally underſtood; and it is enough for me to ſay here, that if practitioners will attend, and patients will ſubmit, to the general

general rules given above, they will ſeldom fail of obtaining a certain and ſpeedy cure of the diſeaſe.

CHAP. III.

OF SCURVY.

MDCCLXXXIX.

THIS diſeaſe appears ſo frequently, and the effects of it are ſo often fatal, in fleets and armies, that it has very properly engaged the particular attention of phyſicians. It is indeed ſurpriſing that it had not ſooner attracted the eſpecial notice both of ſtateſmen and phyſicians, ſo as to have produced thoſe meaſures and regulations that might prevent the havock which

which it ſo often occaſions. Within theſe laſt fifty years, however, it has been ſo much attended to and ſtudied, that we might ſuppoſe every circumſtance relating to it ſo fully and exactly aſcertained, as to render all further labour upon the ſubject ſuperfluous. This perhaps may be true; but it appears to me, that there are ſtill ſeveral circumſtances regarding the diſeaſe not agreed upon among phyſicians, as well as different opinions formed, ſome of which may have a bad effect upon the practice: and this ſeems to me to be ſo much the caſe, that I hope I ſhall be excuſed in endeavouring here to ſtate the facts as they appear to me from the beſt authorities, and to offer remarks upon opinions which may influence the practice in the prevention and cure of this diſeaſe.

MDCCXC.

With reſpect to the phenomena of the diſeaſe, they have now been ſo fully obſerved, and ſo accurately deſcribed, that there is no longer any doubt in diſcerning the diſeaſe when it is preſent, or in diſtinguiſhing it from almoſt every other ailment. In particular, it ſeems now to be fully determined, that there is one diſeaſe only, intitled to the appellation of Scurvy; that it is the ſame upon the land as upon the ſea; that it is the ſame in all climates and ſeaſons, as depending every where upon nearly the ſame cauſes; and that it is not at all diverſified, either in its phenomena or its cauſes, as had been imagined ſome time ago.

MDCCXCI.

The phenomena of ſcurvy, therefore, are

are not to be deſcribed here, as it has been ſo fully and accurately done elſewhere; and I ſhall only endeavour to aſcertain thoſe facts with reſpect to the prevention and cure of the diſeaſe which ſeem not yet to be exactly agreed upon. And, firſt, with reſpect to the antecedents that may be conſidered as the remote cauſes of the diſeaſe.

MDCCXCII.

The moſt remarkable circumſtance amongſt the antecedents of this diſeaſe is, that it has moſt commonly happened to men living very much on ſalted meats; and whether it ever ariſe in any other circumſtances, is extremely doubtful. Theſe meats are often in a putreſcent ſtate; and to the circumſtance of the long continued uſe of animal food in a putreſcent and ſomewhat indigeſtible ſtate, the

diſeaſe has been eſpecially attributed. Whether the circumſtance of the meat's being ſalted, has any effect in producing the diſeaſe, otherwiſe than by being rendered more indigeſtible, is a queſtion that remains ſtill in diſpute.

MDCCXCIII.

It ſeems to me, that the ſalt concurs in producing the effect; for there is hardly any inſtance of the diſeaſe appearing unleſs where ſalted meats had been employed, and ſcarcely an example where the long continued uſe of theſe did not produce it: beſides all which, there are ſome inſtances where, by avoiding ſalted meats, or by diminiſhing the proportion of them in diet, while other circumſtances remained much the ſame, the diſeaſe was prevented from appearing. Further, if it may be admitted as an argument upon this ſubject, I ſhall hereafter en-

deavour

deavour to ſhow, that the large uſe of ſalt has a tendency to aggravate and increaſe the proximate cauſe of ſcurvy.

MDCCXCIV.

It muſt however be allowed, that the principal circumſtance in cauſing ſcurvy, is the living very much and very long upon animal food, eſpecially when in a putreſcent ſtate; and the clear proof of this is, that a quantity of freſh vegetable food will always certainly prevent the diſeaſe.

MDCCXCV.

While it has been held, that, in thoſe circumſtances in which ſcurvy is produced, the animal food employed was eſpecially hurtful by its being of difficult digeſtion, this opinion has been attempted to be confirmed, by obſerving, that the reſt of

the

the food employed in the ſame circumſtances was alſo of difficult digeſtion. This is ſuppoſed to be eſpecially the caſe of unfermented farinacea which ſo commonly makes a part of the ſea-diet. But I apprehend this opinion to be very ill-founded; for the unfermented farinacea, which are in a great proportion the food of infants, of women, and of the greater part of mankind, can hardly be ſuppoſed to be food of difficult digeſtion: and with reſpect to the production of ſcurvy, there are facts which ſhow, that unfermented farinacea, employed in large proportion, have had a conſiderable effect in preventing the diſeaſe.

MDCCXCVI.

It has been imagined, that a certain impregnation of the air upon the ſea had an effect in producing ſcurvy. But it is altogether improbable: for the only impreg-

pregnations which could be ſuſpected, are thoſe of inflammable or mephitic air; and it is now well known, that theſe impregnations are much leſs in the air upon the ſea than in that upon the land; beſides, there are otherwiſe many proofs of the ſalubrity of the ſea-air. If, therefore, ſea-air have any effect in producing ſcurvy, it muſt be by its ſenſible qualities of cold or moiſture.

MDCCXCVII.

That cold has an effect in favouring the production of ſcurvy, is manifeſt from hence, that the diſeaſe is more frequent and more conſiderable in cold than in warm climates and ſeaſons; and that even warm cloathing has a conſiderable effect in preventing it.

MDCCXCVIII.

MDCCXCVIII.

Moiſture may in general have an effect in favouring the production of ſcurvy, where that of the atmoſphere in which men are placed is very conſiderable: but the ordinary moiſture of the ſea-air is far from being ſuch. Probably it is never conſiderable, except in the caſe of unuſual rains; and even then, it is perhaps by the application of moiſture to the bodies of men in damp cloathing only that it has any ſhare in the production of ſcurvy. At the ſame time, I believe there is no inſtance of either cold or moiſture producing ſcurvy, without the concurrence of the faulty ſea diet.

MDCCXCIX.

Under thoſe circumſtances which produce ſcurvy, it commonly ſeems to occur moſt readily in the perſons who are the leaſt

leaſt exerciſed; and it is therefore probable, that confinement and want of exerciſe may have a great ſhare in producing the diſeaſe.

MDCCC.

It appears that weakneſs, in whatever manner occaſioned, is favourable to the production of ſcurvy. It is therefore probable, that unuſual labour and fatigue may often have ſome ſhare in bringing it on: and upon the ſame account, it is probable, that ſadneſs and deſpondency may induce a weakneſs of the circulation; and be thereby, as has been remarked, favourable to the production of ſcurvy.

MDCCCI.

It has alſo been obſerved, that perſons negligent in keeping their ſkin clean by waſhing and change of cloathing, are more liable

liable than others to be affected with ſcurvy.

MDCCCII.

Several of theſe cauſes, now mentioned, concurring together, ſeem to produce ſcurvy; but there is no proper evidence that any one of them alone will produce it, or that all the others uniting together will do it, without the particular concurrence of the ſea diet. Alongſt with this, however, ſeveral of the other circumſtances mentioned, have a great effect in producing it ſooner, and in a more conſiderable degree, than would otherwiſe have happened from the diet alone.

MDCCCIII.

From this view of the remote cauſes, it will readily appear, that the prevention

tion of the diseafe may in fome meafure depend upon the avoiding of thofe circumftances which we have enumerated as contributing to bring on the difeafe fooner than it would otherwife come on. At the fame time, the only effectual means will be, by avoiding the diet of falted meats; at leaft by leffening the proportion of thefe, and ufing meat preferved otherwife than by falt; by ufing in diet any kind of efculent vegetable matter that can be obtained; and efpecially by ufing vegetable matters the moft difpofed to acefcency, fuch as malt; and by drinking a large quantity of pure water.

MDCCCIV.

The cure of fcurvy feems now to be very well afcertained; and when the neceffary means can be obtained, the difeafe is commonly removed very quickly. The chief

chief means is a food of fresh and succulent vegetables, and those almost of any kind that are at all esculent. Those most immediately effectual are the acid fruits, and, as being of the same nature, all sort of fermented liquor.

MDCCCV.

The plants named *alkalescent*, such as those of the garlic tribe and of the tetradynamiæ, are also particularly useful in the cure of this disease; for, notwithstanding their appellation, they in the first part of their fermentation undergo an acescency, and seem to contain a great deal of acescent matter. At the same time, they have generally in their composition an acrid matter that readily passes by urine, probably by perspiration; and, by promoting both excretions, are useful in the disease. It is probable, that some plants of the coniferous

niferous tribe, ſuch as the ſpruce fir, and others poſſeſſed of a diuretic power, may likewiſe be of ſome uſe.

MDCCCVI.

It is ſufficiently probable, that milk of every kind, and particularly its productions whey and butter-milk, may prove a cure of this diſeaſe.

MDCCCVII.

It has been common in this diſeaſe to employ the foſſil acids; but there is reaſon to doubt if they be of any ſervice, and it is certain they are not effectual remedies. They can hardly be thrown in, in ſuch quantity as to be uſeful antiſeptics; and as they do not ſeem to enter into the compoſition of the animal fluids, and probably paſs off unchanged by the excretions, ſo

they can do little in changing the ſtate of the fluids.

MDCCCVIII.

The great debility which conſtantly attends ſcurvy, has naturally led phyſicians to employ tonic and ſtrengthening medicines, particularly the Peruvian bark; but the efficacy of it ſeems to me very doubtful. It is ſurpriſing how ſoon the uſe of a vegetable diet reſtores the ſtrength of ſcorbutic perſons; which ſeems to ſhow that the preceding debility had depended upon the ſtate of the fluids; and conſequently, till the ſound ſtate of theſe can be reſtored, no tonic remedy can have much effect: but as the Peruvian bark has little power in changing the ſtate of the fluids, ſo it can have little effect in ſcurvy.

MDCCCIX.

MDCCCIX.

I ſhall conclude my obſervations upon the medicines employed in ſcurvy, with remarking, that the uſe of mercury is always manifeſtly hurtful.

MDCCCX.

After having obſerved that both the prevention and cure of this diſeaſe are now very well known, it may ſeem unneceſſary to enter into much diſcuſſion concerning its proximate cauſe: but as ſuch diſcuſſions can hardly be avoided, and as falſe opinions may in ſome meaſure corrupt the practice, I ſhall venture to ſuggeſt here what appears to me moſt probable upon the ſubject.

MDCCCXI.

Notwithſtanding what has been aſſerted by ſome eminent perſons, I truſt to the concurring teſtimony of the moſt part of the authors upon the ſubject, that in ſcurvy the fluids ſuffer a conſiderable change.

From theſe authors we learn, that in the blood drawn from the veins of perſons labouring under the ſcurvy, the craſſamentum is different both in colour and conſiſtence from what it is in healthy perſons; and that at the ſame time the ſerum is commonly changed both in colour and taſte. The excretions alſo, in ſcorbutic perſons, ſhow a change in the ſtate of the fluids. The breath is fetid; the urine is always high-coloured, and more acrid than uſual; and if that acrid exſudation from the feet, which Dr Hulme takes notice of, happens eſpecially in ſcorbutic perſons, it will be a remarkable proof

proof to the ſame purpoſe. But however this may be, there is evidence enough that in ſcurvy the natural ſtate of the fluids is conſiderably changed. Further, I apprehend it may be confidently preſumed from this, that the diſeaſe is brought on by a particular nouriſhment introduced into the body, and is as certainly cured by the taking in of a different diet. In the latter caſe, the diet uſed has no other evident operation, than that of giving a particular ſtate and condition to the fluids.

MDCCCXII.

Preſuming, therefore, that the diſeaſe depends upon a particular condition of the fluids of the body, the next ſubject of inquiry is, What that condition may be?

With this view, I muſt obſerve, that the animal œconomy has a ſingular power of changing aceſcent aliments, in ſuch a

manner, as to render them much more diſpoſed to putrefaction; and although, in a living ſtate, they hardly ever proceed to an actually putrid ſtate; yet in man, whoſe aliment is of a mixed kind, it is pretty certain, that if he were to live entirely upon animal food, without a frequent ſupply of vegetable aliment, his fluids would advance further towards putrefaction than is conſiſtent with health. This advance towards putrefaction ſeems to conſiſt in the production and evolution of a ſaline matter which did not appear in the vegetable aliment, and could not be produced or evolved in it, but by carrying on its fermentation to a putrefactive ſtate. That this ſaline ſtate is conſtantly in ſome meaſure produced and evolved by the animal proceſs, appears from this, that certain excretions of ſaline matter are conſtantly made from the human body, and are therefore preſumed neceſſary to its health.

From

From all this, it may be readily understood, how the continual uſe of animal food, eſpecially when already in a putreſcent ſtate, without a mixture of vegetable, may have the effect of carrying the animal proceſs too far, and particularly of producing and evolving a larger proportion of ſaline matter. That ſuch a preternatural quantity of ſaline matter does exiſt in the blood of ſcorbutic perſons, appears from the ſtate of the fluids above-mentioned. It will be a confirmation of all this to obſerve, that every interruption of perſpiration, that is, the retention of ſaline matter, contributes to the production of ſcurvy; and this interruption is eſpecially owing to the application of cold, or to whatever elſe weakens the force of the circulation, ſuch as the neglect or want of exerciſe, fatigue, and deſpondency of the mind. It deſerves indeed to be remarked here, that one of the firſt effects

of the ſcurvy once induced, is very ſoon to occaſion a great debility of the ſyſtem, which occaſions of courſe a more rapid progreſs of the diſeaſe. How the ſtate of the fluids may induce ſuch a debility is not well underſtood; but that it does depend upon ſuch a ſtate of the fluids, is rendered ſufficiently preſumable from what has been ſaid above with regard to both the cauſes and the cure of ſcurvy.

MDCCCXIII.

It is poſſible, that this debility may have a great ſhare in producing ſeveral of the phenomena of ſcurvy; but a preternaturally ſaline, and conſequently diſſolved ſtate of the blood, will account for them with more probability; and I do not think it neceſſary to perſons who are at all accuſtomed to reaſon upon the animal œconomy, to explain this matter more fully. I

have

have only to add, that if my opinion in ſuppoſing the proximate cauſe of ſcurvy to be a preternaturally ſaline ſtate of the blood be at all founded, it will be ſufficiently obvious, that the throwing into the body along with the aliment an unuſual quantity of ſalt, may have a great ſhare in producing the diſeaſe. Even ſuppoſing ſuch ſalt to ſuffer no change in the animal body, the effect of it may be conſiderable; and this will be rendered ſtill more probable, if it may be preſumed, that all neutral ſalts, conſiſting of a fixed alkali, are changed in the animal body into an ammoniacal ſalt; which I apprehend to be that eſpecially prevailing in ſcurvy. If I be at all right in concluding, that meats, from being ſalted, contribute to the production of ſcurvy, it will readily appear, how dangerous it may be to admit the concluſion from another theory, that they are perfectly innocent.

MDCCCXIV.

MDCCCXIV.

Having thus endeavoured to explain what relates to the cure of ſcurvy in general, I judge it proper to leave to other authors, what relates to the management of thoſe ſymptoms which require a particular treatment.

CHAP. IV.

OF JAUNDICE.

MDCCCXV.

I Have here paſſed over ſeveral of the titles in my noſology, becauſe they are diſeaſes not of this Iſland. In theſe, therefore, I have no experience; and without that, the compiling from other writers is always extremely fallacious. For theſe reaſons I omit them; and ſhall now only offer ſome remarks upon the ſubject of jaundice,

dice, the laſt in order that I can poſſibly introduce in my courſe of Lectures.

MDCCCXVI.

The jaundice conſiſts in a yellow colour of the ſkin over the whole body, and particularly of the adnata of the eyes. This yellow colour may occur from different cauſes: but in the jaundice, hereafter to be more exactly characteriſed, I judge it to depend upon a quantity of bile preſent in the maſs of blood; and which, thrown out upon the ſurface, gives its own proper colour to the ſkin and eyes.

MDCCCXVII.

That the diſeaſe depends upon this, we know particularly and certainly from the cauſes by which it is produced. In order to explain theſe, I muſt obſerve, that bile does

does not exiſt in its proper form in the maſs of blood, and cannot appear in this form till it has paſſed the ſecretory organ of the liver. The bile therefore cannot appear in the maſs of blood, or upon the ſurface of the body, that is, produce jaundice from any interruption of its ſecretion; and accordingly, if jaundice does appear, it muſt be in conſequence of the bile, after it had been ſecerned, being again taken into the blood-veſſels.

This may happen in two ways; either by an interruption of its excretion, that is, of its paſſage into the duodenum, which by accumulating it in the biliary veſſels, may give occaſion to its paſſing again into the blood-veſſels; or it may paſs into theſe, by its being abſorbed from the alimentary canal when it happens to be accumulated there in an unuſual quantity. How far the latter cauſe can take place, or in what circumſtances it does occur,

I

I cannot clearly aſcertain, and I apprehend that jaundice is ſeldom produced in that manner.

MDCCCXVIII.

The former cauſe of ſtopped excretion may be underſtood more clearly; and we have very certain proof of its being the ordinary, and indeed almoſt the univerſal cauſe of this diſeaſe. Upon this ſubject it will be obvious, that the interrupted excretion of the bile muſt depend upon an obſtruction of the *ductus communis choledochus*; the moſt common cauſe of which is a biliary concretion formed in the gall-bladder, and from thence fallen down into the ductus communis, it being at the ſame time of ſuch a ſize as not to paſs readily through that duct into the duodenum. This duct may likewiſe be obſtructed by a ſpaſmodic conſtriction affecting it: and

ſuch ſpaſm may happen, either in the duct itſelf, which we ſuppoſe to be contractile; or in the duodenum preſſing the ſides of the duct cloſe together; or, laſtly, the duct may be obſtructed by a tumour compreſſing it, and that ariſing either in the coats of the duct itſelf, or in any of the neighbouring parts that are, or may come to be, contiguous to it.

MDCCCXIX.

When ſuch obſtruction happens, the ſecreted bile muſt be accumulated in the biliary ducts; and from thence it may either be abſorbed and carried by the lymphatics into the blood-veſſels, or it may regurgitate in the ducts themſelves, and paſs from them directly into the aſcending cava. In either ways, it comes to be diffuſed in the maſs of blood; and from thence may paſs by every exhalant veſſel, and produce the diſeaſe in queſtion.

MDCCCXX.

MDCCCXX.

I have thus ſhortly explained the ordinary production of jaundice: but it muſt be obſerved further, that it is at all times accompanied with certain other ſymptoms, ſuch as a whiteneſs of the *fæces alvinæ*, which we readily account for from the abſence of bile in the inteſtines; and generally, alſo, with a certain conſiſtence of the fæces, the cauſe of which it is not ſo eaſy to explain. The diſeaſe is always accompanied alſo with urine of a yellow colour, or at leaſt with urine that tinges a linen cloth with a yellow colour. Theſe are conſtantly attending ſymptoms; and though not always, yet there is commonly a pain felt in the epigaſtrium, correſponding, as we ſuppoſe, to the ſeat of the ductus communis. This pain is often accompanied with vomiting; and even when the pain is not conſiderable, a vomiting

ſometimes occurs. In ſome caſes, when the pain is conſiderable, the pulſe becomes frequent, full, and hard, and ſome other ſymptoms of pyrexia appear.

MDCCCXXI.

When the jaundice is occaſioned by tumours of the neighbouring parts compreſſing the biliary duct, I believe the diſeaſe can very ſeldom be cured. That ſuch is the cauſe of jaundice, may with ſome probability be ſuppoſed, when it has come on in conſequence of other diſeaſes which had ſubſiſted long before, and more eſpecially ſuch as had been attended with ſymptoms of obſtructed viſcera. Even when the jaundice has ſubſiſted long without any intermiſſion, and without any pain in the epigaſtrium, an external compreſſion is to be ſuſpected.

MDCCCXXII.

In ſuch circumſtances, I conſider the diſeaſe as incurable; and it is almoſt only when the diſeaſe is occaſioned by biliary concretions obſtructing the biliary duct, that we may commonly expect relief, and that our art may contribute to the obtaining it. Such caſes may be generally known, by the diſeaſe frequently diſappearing and returning again; by our finding, after the former accident, biliary concretions amongſt the fæces; and by the diſeaſe being frequently accompanied with pain of the epigaſtrium, and with vomitings ariſing from ſuch pain.

MDCCCXXIII.

In theſe caſes, we know of no certain and immediate means of expediting the paſſage of the biliary concretions. This is

is generally a work of time, depending upon the gradual dilatation of the biliary duct; and it is surprising to observe, from the size of the stones which sometimes pass through, what dilatation the duct will admit of. It proceeds, however, faster or slower upon different occasions; and therefore the jaundice, after a various duration, often ceases suddenly and spontaneously. It is this which has given rise to the belief, that the jaundice has been cured by such a number and such a variety of different remedies. Many of these, however, are perfectly inert, and many others of them such as cannot be supposed to have any effect in expeding the passage of a biliary concretion. I shall here, therefore, take no notice of the numerous remedies of jaundice mentioned by the writers on the Materia Medica, or even of those to be found in practical authors; but shall confine myself to the mention of

thoſe that may with probability be ſuppoſed to favour the paſſage of the concretion, or remove the obſtacles to it which may occur.

MDCCCXXIV.

In the treatment of this diſeaſe, it is, in the firſt place, to be attended to, that as the diſtention of the biliary duct, by a hard maſs that does not eaſily paſs through it, may excite inflammation there; ſo, in perſons of tolerable vigour, blood-letting may be an uſeful precaution; and when much pain, together with any degree of pyrexia occurs, it becomes an abſolutely neceſſary remedy. In ſome inſtances of jaundice accompanied with theſe ſymptoms, I have found the blood drawn covered with an inflammatory cruſt as thick as in caſes of pneumonia.

MDCCCXXV.

MDCCCXXV.

There is no means of puſhing forward a biliary concretion that is more probable than the action of vomiting; which, by compreſſing the whole abdominal viſcera, and particularly the full and diſtended gall-bladder and biliary veſſels, may contribute, ſometimes gently enough, to the dilatation of the biliary duct. Accordingly vomiting has often been found uſeful for this purpoſe: but at the ſame time it is poſſible, that the force exerted in the act of vomiting may be too violent, and therefore gentle vomits ought only to be employed. And either when, by the long continuance of the jaundice, it may be ſuſpected that the ſize of the concretion then paſſing is large; or more eſpecially when pain attending the diſeaſe gives apprehenſion of inflammation, it may be prudent to avoid vomiting altogether.

MDCCCXXVI.

It has been uſual in the jaundice to employ purgatives; and it is poſſible that the action of the inteſtines may excite the action of the biliary ducts, and thus favour the expulſion of the biliary concretion: but this, I think, cannot be of much effect; and the attempting it by the frequent uſe of purgatives, may otherwiſe hurt the patient. For this reaſon I apprehend, that purgatives can never be proper, excepting when there is a ſlow and bound belly.

MDCCCXXVII.

As the relaxation of the ſkin contributes to relax the whole ſyſtem, and particularly to relieve the conſtriction of ſubjacent parts; ſo, when the jaundice is attended with pain, fomentations of the epigaſtrium may be of ſervice.

MDCCCXXVIII.

MDCCCXXVIII.

As the ſolids of the living body are very flexible and yielding; ſo it is probable, that biliary concretions would in many caſes find the biliary duct readily admit of ſuch dilatation as to render their paſſage through it eaſy, were it not that the diſtention occaſions a preternatural ſpaſmodic contraction of the parts below. Upon this account, opium is often of great benefit in jaundice; and the benefit reſulting from its uſe, proves ſufficiently the truth of the theory upon which the uſing of it has been founded.

MDCCCCXXIX.

It were much to be wiſhed, that a ſolvent of biliary concretions, which might be applied to them in the gall-bladder or biliary ducts, was diſcovered: but none

ſuch, ſo far as I know, has yet been found; and the employment of ſoap in this diſeaſe, I conſider as a frivolous attempt. Dr White of York has found a ſolvent of biliary concretions when theſe are out of the body; but there is not the leaſt probability that it could reach them while lodged within.

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